TRAFFIC DIGEST and Review

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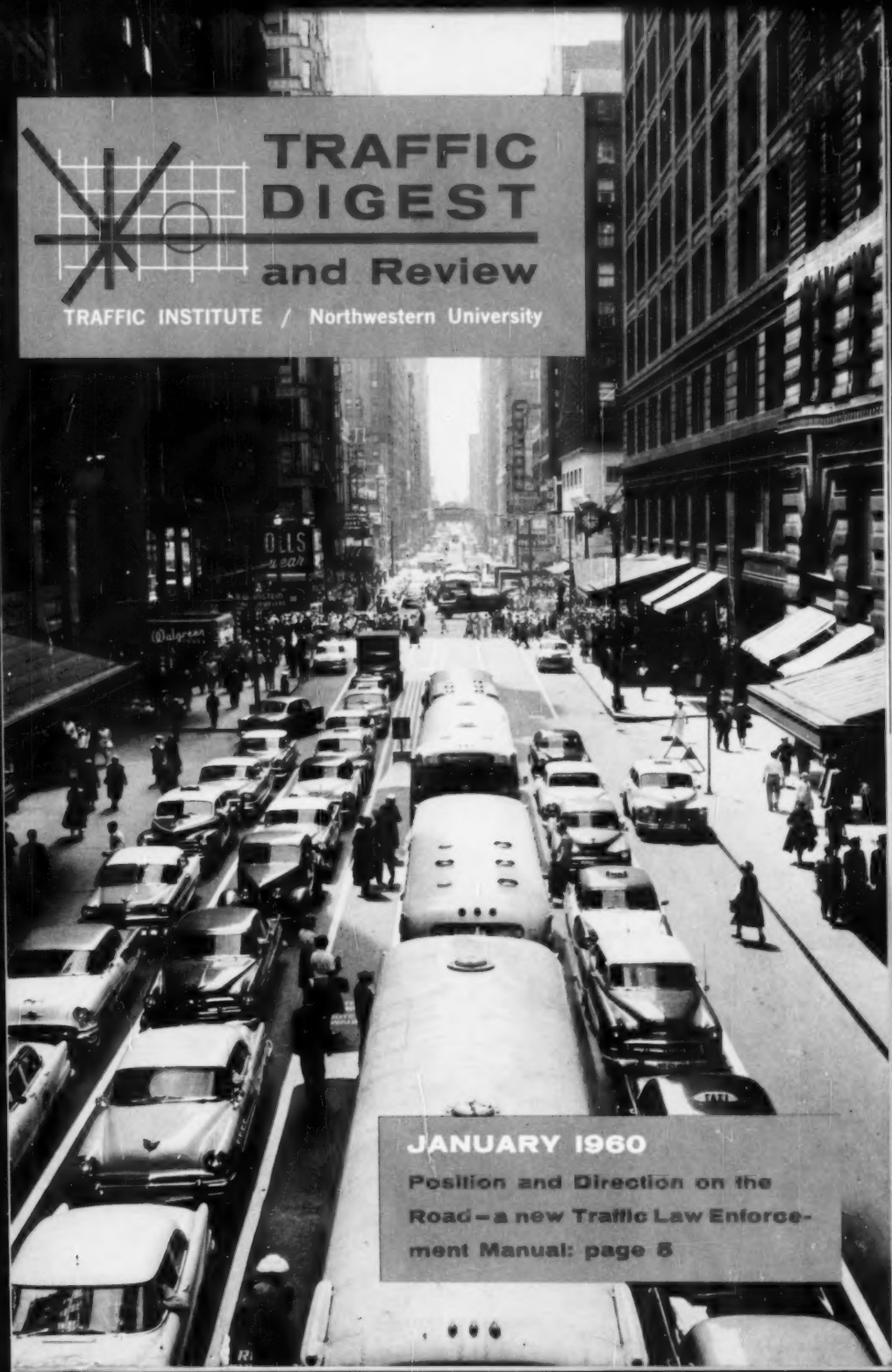

JANUARY 1960

Position and Direction on the Road—a new Traffic Law Enforcement Manual: page 8

WHY ? do you INVESTIGATE ACCIDENTS

Generally, the accident investigation programs of municipal and state police agencies tend to stress the technical aspects of this work, emphasizing the following services:

1. Rendering direct aid to persons involved in accidents.
2. Protecting highway users from the hazards present at accident scenes.
3. Getting available information "for the record"—for the sake of having facts on file for whatever need may arise.
4. Taking enforcement action when evidence of a violation is found.
5. Keeping driver-record files in the police records bureau.

None of these is a wrong purpose. However, there are two other objectives of accident investigation which we must recognize as being the most important of all, namely: determining the *real causes* of accidents, as distinguished from the violations or adverse conditions which may have been involved, and procuring *basic information* about accidents which is needed by all the official and non-official agencies working towards improved highway safety.

Accident prevention in all its aspects—improvement of the driver, the vehicle, or the highway—depends upon pertinent and valid information about *how* accidents happen, but more importantly, upon professional-level information about *why* they happen.

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Briefly...

POLICE OFFICERS hired by counties or municipalities in New York State after July 1, 1960, will have to complete a state-approved training course. According to the International City Managers' Association, an eight-member council composed of representatives of the state sheriffs' association and the state association of police chiefs, the New York City police commissioner and three others named by the governor, will recommend standards for training courses required for promotion as well as for initial appointment.

THE SECOND of two state-wide vehicle safety checks conducted this year by the Wisconsin State Patrol with the cooperation of city and county enforcement authorities tends to support the hypothesis that from 25 to 30 percent of the vehicles on the highway are operating with defective equipment. In the most recent check, 47,664 vehicles were examined; 14,493 equipment violation notices were issued.

NEW JERSEY voters have turned down a proposal to let the state use excess New Jersey Turnpike revenues to help the commuter railroads. The proposal had been advanced by Governor Meyner and, prior to the election, had appeared to have heavy backing. However, it lost by more than 220,000 votes out of 1.5 million cast. The state already diverts considerable highway revenues to non-highway users.

BY A TWO-TO-ONE margin, New York voters have approved the creation of a separate State Department of Motor Vehicles. The amendment to the state constitution was strongly supported by highway users.

A PILOT TEST to detect likely traffic violators before they get be-

(Continued on page 4)

TRAFFIC DIGEST and Review

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CONTENTS

Articles

Position and Direction on the Road 5
A new Traffic Law Enforcement Manual

Computers and Analysis of Accident Distribution 9
By Robert P. Shumate

Caldwell Appointed Director of Traffic Institute 15

Standard for Chem Test Technicians 19

Regular Features

Editorial 2
Traffic Training Calendar 16
Know the Law 17

Cover: Special bus lanes in Chicago's downtown "loop" district.

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Editorial

The Quality Of Traffic Law Enforcement

EVERY now and then the newspapers devote space to protests about the general character of current traffic law enforcement. These accounts appear usually as editorial comment, under columnists' bylines, or as letters to the editor. Many times the protests they carry are, unfortunately, justified. Whenever the quality of traffic law enforcement deteriorates to a sufficient degree, the public will object, and in a fashion and to a degree such that enforcement effort must be reduced—usually followed by a marked rise in accidents.

Thus, public support, firmly founded in public confidence, is essential to the maintenance of an effective traffic law enforcement program—and the public safety.

What is it, in our traffic law enforcement work, which is increasing the risk of a loss of public sympathy and support?

Let us review briefly some of the historical development of law enforcement. At the beginning of the century, as the use of the automobile began to be a significant factor in American life, the correlative problem of traffic accidents came more and more into public consciousness. The early effort to cope with this problem, which fell principally to the police and the courts, was focused almost entirely on *speed*. As the accident problem grew more acute, the enforcement programs during the teens and twenties of this century tended to become more stringent; penalties for speeding became more severe. Some judges imposed fines of $100 for offenses which involved driving two or three miles over the 15 or 20 mph speed limit. Although the results gained from this kind of action were questionable, nobody knew what else to propose—there was no known alternative.

These enforcement programs became so severe that the public rebelled. Too-stringent application of traffic laws would simply not be tolerated by the driving community.

When enough public clamor had been raised, the enforcement agencies fell back in retreat. The pressure was taken off; the severity of penalties was diminished.

But accident rates began to shoot up, and with them, death rates. And as these rates went up to alarming levels, important and vocal segments of the population began to demand action.

The enforcement clamps were put on again. The pendulum swung to the other extreme. And this pattern recurred with cyclical regularity. In one large city over a period of 20 years, for example, 10 major peaks of heavy enforcement activity could be noted. Alternating with these are 10 major peaks in the accident-rate chart.

It should be mentioned that, in part, public resistance to enforcement is aggravated by illegal and extra-legal practices carried on by some police, some courts, some municipalities. The stories about certain cities going into the business of deriving municipal income out of traffic violation fines are not always apocryphal.

The main objection to traffic law enforcement in its traditional form arose out of a common-sense reaction of the American people. What the people really wanted and needed was the kind of enforcement which would deal realistically with the problem of accidents in terms which would be understandable and thus acceptable to the public.

About 30 years ago progressive police departments began applying selective enforcement, first on a limited scale, then gradually increasing its scope. Selective enforcement, incidentally, means nothing more than providing the type of enforcement needed — when it is needed, where it is needed, and in the amount necessary to protect the community.

(Continued on page 28)

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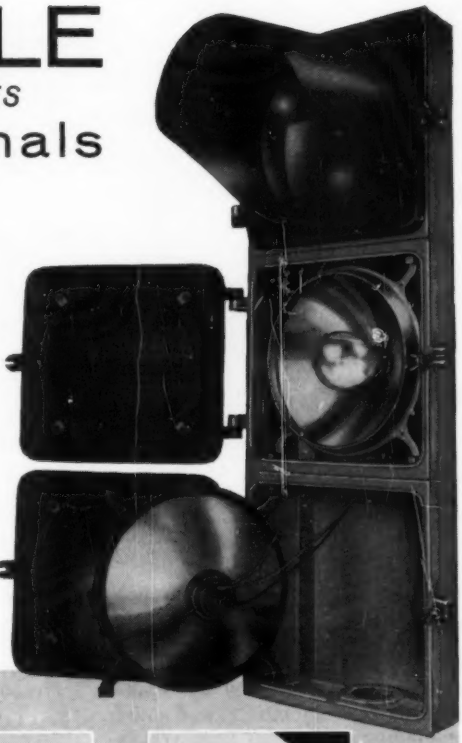

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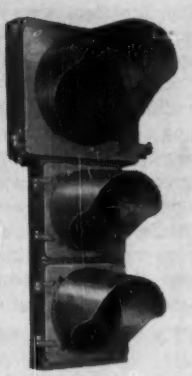

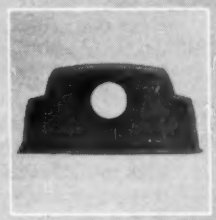

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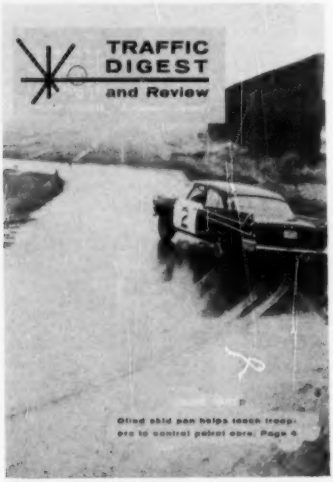

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Briefly . . .

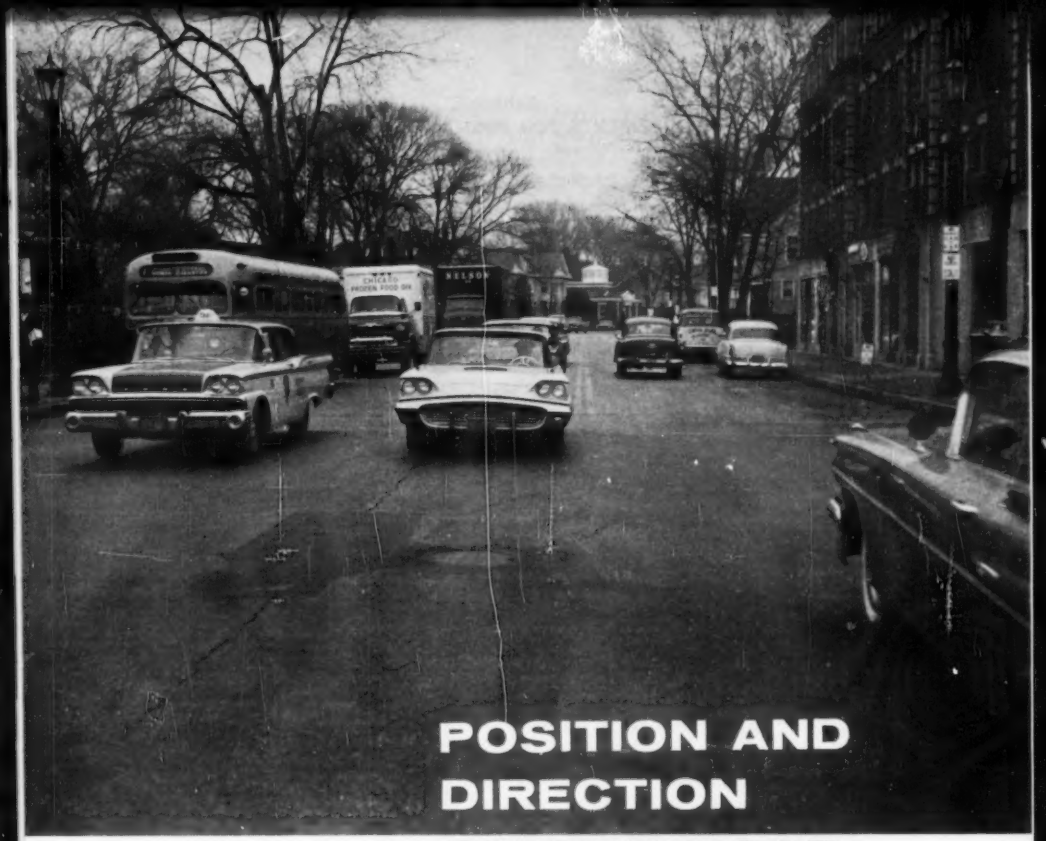
(Continued from page 1)

hind the wheel of a motor vehicle has been developed in a research project at Columbia University. The project was financed by the American Automobile Association. The test requires 10 minutes to administer and is non-fakable. Dr. James L. Malfetti, executive officer of the Columbia University Safety Research and Education Project, said, "If this test has the potential we think it has, a practical psychological test may at last be available for predicting the potential violator and for use in examinations."

THE GENERAL manager of the Association of Casualty and Surety Companies, J. Dewey Dorsett, has urged the public "to shed its apathetic attitude toward conditions which force increases in automobile liability insurance rates." Dorsett listed five principal conditions—all beyond the control of insurance companies—which cause increased rates: a continuing increase in traffic accidents; an increase in the number and amounts of unjust jury verdicts; an increase in the cost of repairs both to people and property following accidents; padded and fraudulent claims; and economic inflation.

MAINE has become the third state (the other two: Michigan and Connecticut) to enact legislation requiring teenagers to have successfully completed a state-approved driver-education course as a prerequisite to obtaining a driver's license at the minimum driving age. The law, which goes into effect September 1, 1960, states that no operator's permit shall be issued to anyone under the age of 17 unless he is able to present a certificate showing successful completion of a state-approved driver-education course and examination.

MARYLAND TEENAGERS attending the first annual traffic safety conference at the University of Maryland adopted some rather startling resolutions calling for: *more rigid* standards for teen-age driving driver licensing, *compulsory* driver education at all high schools, an annual state inspection of cars!



POSITION AND DIRECTION ON THE ROAD

A new manual covering the laws, markings, signs, and enforcement techniques relating to this subject

★ THE TRAFFIC LAW ENFORCEMENT SERIES

PART 1

CERTAIN "rules of the road" relate to position or direction of travel of the moving vehicle on the roadway between intersections even when no other vehicles are present. This manual discusses enforcement of such position and direction laws and related regulations based on authorized signs or pavement markings. Requirements of the standard law *(Uniform Vehicle Code)* are tabulated in Exhibit 1. Special requirements based on signs and pavement markings are tabulated in Exhibit 2. Compare these carefully with requirements in the territory in which you work. Write the section numbers of corresponding laws or ordinances for your area in the spaces provided in these tables. If your laws or ordinances differ, write in your requirements.

Note that laws relating to position and direction on the road apply not just to motor vehicles, but to all vehicles. This means they also apply to motorcycles, horse-drawn wagons, trolley buses, and self-propelled machinery. Also note that standard laws relating to position on the *roadway* are limited to position on streets or highways which, by definition, are publicly maintained. This

Exhibit 1

GENERAL LEGAL REQUIREMENTS FOR POSITION AND DIRECTION ON ROADWAYS

Subject	Requirements of Standard Law	Our Law Or Ordinance	
		Requirements	Section No.
Any roadway—vehicle less than normal speed	Drive in right lane available to traffic or as close as practical to right curb or edge except: 1. When overtaking or passing. 2. When preparing for a left turn at an intersection or private road or driveway.		
One-way roadway designated as such or in divided highway	1. Drive only in direction designated. 2. Drive only in the right-hand roadway.		
Two-way roadway	Drive on right half except: 1. When overtaking and passing where permitted. 2. When right half is closed for construction or repair. 3. When roadway is less than twice width of vehicle. 4. Where divisional lines or other devices indicate more than half of the road. 5. In making left turn at intersection or private driveway.		
	Never drive on left half: 1. When approaching crest of hill if view of vehicle which might approach from opposite direction would be obstructed.		
	2. When approaching curve if view of vehicle which might be approaching from opposite direction would be obstructed.		
	3. When in or within 100 ft. of an intersection with another roadway.		
	4. When on or within 100 ft. of a railroad grade crossing.		
	5. When view is obstructed upon approaching within 100 ft. of any bridge or tunnel.		
Mountain highways, canyons, defiles	Sound horn if view is obstructed within 200 ft.		

means that generally they do not apply on private but only on public roads. This may not be true in your territory.

The purpose of this manual is to identify violations of the law relating to position and direction when no other vehicles are involved, tell you how to look for such violations, and suggest what to do about them after you find them.

Subjects not covered. Some problems which will come up in connection with enforcement of laws relating to position of vehicles on the roadway are beyond the scope of this manual. The present unit refers only to position on the road in forward movement. It does not apply to positions for, or during, turns at intersections; to positions in parking, stopping or standing; or to following, overtaking and passing. All of these are discussed in special units on these subjects. Pedestrians also may be improperly positioned on the roadway, but pedestrian position is discussed in connection with other pedestrian violations. In some places there are special laws or ordinances regulating operation of vehicles in traffic lanes occupied by street car tracks, but because street cars are now operated in few cities, this subject has been omitted.

Apply in Absence of Markings

Enforcement of laws relating to position is not limited to places where there are signs or pavement markings. In fact, all the basic laws summarized in Exhibit 1 apply even in the absence of markings.

Relationship between position violations and other traffic law violations. Improper position on the road may result from some other kind of violation. It may even be an element of another, more serious, driver offense.

For example, a vehicle swings to the wrong side of the road on a sharp curve because of excessive speed. The fact that the vehicle is on the wrong side is then part of the evidence indicating excessive speed or possibly the even more serious offense of reckless driving.

Improper position may be the result of, or related to physical, mental, or emotional condition of the driver.

For example, a driver may be going the wrong way on a one-way road because he is intoxicated. His direction of travel may be part of the proof that he was driving under the influence of alcohol.

Another possibility is that improperly positioned vehicles may indicate immaturity, inexperience, or improper training and suggest that the driver may not have a driver's license.

Definitions of Control Devices

Some terms used in this manual have meanings which are important in describing enforcement activities related to position and direction on the road. Standard definitions of some of these are given and briefly discussed in the following paragraph. The definitions used in your territory may differ, but probably not importantly.

Road—"The part of a trafficway which includes both the roadway, which is the paved or travelled portion, and any shoulder alongside the roadway." The road extends to an *unmountable* curb, the *outer* edge of the shoulder, or a guardrail.

Roadway—"That portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the berm or shoulder. In the event a highway includes two or more separate roadways, the term roadway refers to any such roadway separately but not to all such roadways collectively." (From *Uniform Vehicle Code*). If there are unmountable curbs, the roadway extends to the curbs and the roadway is the same as the road. On roads where there are no curbs, the pavement is usually the roadway. If shoulders are paved, a different kind of pavement is used on the shoulder and generally a line painted on the pavement shows separation of roadway from shoulder. On gravel and dirt roads, it is sometimes difficult to tell where the roadway stops and the shoulder begins, but the roadway is always the travelled part.

Exhibit 2

SPECIAL REQUIREMENTS FOR POSITION ON MARKED ROADWAYS

Subject	Requirements	Our Law Or Ordinance	
		Requirements	Section No.
No passing zones	Never drive over barrier line on right side of center or lane line.		
Divisional lines	Never drive on left half of road in zone indicated by sign.		
	Never drive over barrier lines separating lanes to be used by traffic moving in opposite direction.		
	Keep to right on non-barrier divisional or center lines. Exceptions: same as for driving on left half of two-way unmarked roadway.		
Marked lanes	Drive entirely within a single lane as nearly as practical.		
	Do not move from lane until movement can be made in safety.		
Marked middle lane of 3-lane, two-way roadway	Do not drive in except: 1. When overtaking and passing when permitted. 2. When preparing to make a left turn. 3. When lane is allocated specifically to traffic in one direction by signs.		
Special Signs	Drive in lanes designated for special use indicated.		
Safety Zones	Never drive in or through.		

Parking and other auxiliary lanes are part of the roadway when they are within unmountable curbs.

Laned roadway — "A roadway which is divided into two or more clearly marked lanes for vehicular traffic." (From *Uniform Vehicle Code*). Lanes are marked by *lane lines, divisional lines, center lines, barrier lines, edge lines,* and sometimes by parking stall markings.

Vehicle—"Every device in, upon or by which any person or property is or may be transported or drawn upon a highway, excepting devices moved by human power or used exclusively upon stationary rails or tracks." (From *Uniform Vehicle Code*).

Traffic lane—"A strip of roadway intended to accommodate a single line of moving vehicles." (From *Highway Capacity Manual*). Lanes may vary from about nine to 13 feet wide. Four-wheeled vehicles using them vary from five to eight feet wide. Shoulders and parking lanes are not traffic lanes.

(Continued on page 20)

COMPUTERS AND ANALYSIS OF ACCIDENT DISTRIBUTION

Use of modern data-processing systems can provide more reliable accident information for engineering and enforcement

BY ROBERT P. SHUMATE
Assistant Director for Research and Development
IACP Field Service Division

TWO SEPARATE but closely related matters will be discussed in this article. The first is a method of determining and predicting motor vehicle traffic accident distributions on a street or highway network. The second deals with the mechanics of the method, in connection with which I shall illustrate an application of modern computers to this type of problem.

Most accident prevention activities, such as enforcement, are based on advance predictions of where and when accidents will occur. If such predictions are reasonably accurate, preventive activities can be directed at those points in space and time where most accidents will occur. The predictability of accident distributions has been demonstrated frequently enough to be accepted as an established fact. Thus we may now turn to consideration of the most efficient and reliable technique for making the predictions.

In both theory and practice the prediction of future accident concentrations is based upon the character of past accidents. This is another way of saying that what we observe about where accidents happen this year will probably prevail substantially next year. This is *not* to say that if we observe an accident at 2:00 p.m. on Thursday, November 12, at 8th and Elm Street, we will observe precisely the same occurrence next year. What it does mean is that, if we have 20 accidents at 8th and Elm over a period of a year, it is very likely that we will have somewhere between 16 and 24 accidents at this location during the following year.

One point frequently overlooked in discussions of accident predictability is that we are primarily concerned with relative distributions rather than absolute numbers of accidents. Perhaps the simplest way to illustrate this is to compare four

theoretical sections of a city for different time periods, a year against a month.

Area	A	B	C	D	Total
Year	40	10	30	20	100
Month	4	1	3	2	10

If we examine the numbers of accidents in each area for the different time periods, we find quite wide differences in the absolute numbers involved. However, when we reduce the absolute value to the per cent of the total in each area we find the relative distribution to be the same for both the yearly and the monthly period.

A	B	C	D
40%	10%	30%	20%

Relative distributions are important because they permit, among other things, the equalizing of time periods of different length and areas of different size.

We may illustrate what is meant by equalization through the use of a simple situation unlikely to be encountered in real life. Let us take two sections of highway identical in respect to their physical construction except that one is two miles long and the other one mile. Assume that these two sections of highway are located adjacent to each other and that during the month of June exactly the same number of drivers passes over each section. In the normal course of events we would expect that the two-mile section would produce twice as many accidents as the one-mile section by virtue of the fact that each driver spends twice as much time and drives twice as far on the two-mile section.

Comparing Two Sections

If we attempt to compare these two sections for the purpose of selecting which had the highest accident density, we must take into account the fact that one is twice as long as the other. Perhaps the easiest way of doing this is to reduce the accident experience to the number of accidents that occur per mile of highway which makes the two sections equivalent for comparative purposes.

While equalization of this type does not take into consideration other factors, such as volume of traffic, difference in physical design characteristics, and the drivers on different sections of highway, in a sense it cancels out the obvious (difference in length) so that the other factors stand out more clearly. Methods of equalizing accident experience are useful primarily in cutting down the amount of time involved in following down false leads.

Any useful application of past accident distributions is, of course, predicated upon their reliability as a predictor of future distributions. The fact that accidents occur in repetitive patterns over time and in areas has been recognized since as early as 1930. On the basis of this fact, police manpower is assigned by time of day and by location. Moreover, locations with more than their proportionate share of accidents have been selected for engineering studies. The technique of enforcement on this basis has gained considerable recognition under the general term "selective enforcement."

Distribution on Area Basis

While the repetitive patterns that accidents follow involve numerous factors, including location, time of occurrence, type of occurrence, and units involved, we will limit our discussion to techniques for studying distributions on an area basis. A useful and economical device for observing distributions of accidents on an area basis is the spot map. Accidents are represented by pins stuck into a large scale map. As more and more accidents are accumulated, areas with a high density of accidents begin to show up as clusters of pins. Thus an overall picture of the distribution of accidents may be developed for the time period under examination. While this technique has proved its usefulness it has some drawbacks, however. These are:

1. The evaluation of accident distributions is somewhat impressionistic particularly for locations that have marginal accident densities.
2. Changes from one time period to another must be remembered.
3. The interpretation of what the map portrays is somewhat subjective.
4. The time involved in maintaining such maps may be excessive if the

area is large or the accident experience high.

Until recently no other method that would permit regular periodic evaluation of accident distributions by area with a reasonable expenditure of manpower and money was available. With the advent of modern digital computers, now widely available, this limitation has been eliminated.

In the early fall of 1959 the research section of the Field Service Division of the International Association of Chiefs of Police completed development of an experimental program for analyzing accident distributions by location on a statewide basis. Subsequently the program was tested, and slightly modified, and is now being used by the Wisconsin State Patrol.

The objective of the program was to make possible the selection of high-density highway segments by a completely objective, quantitative method. One way this can be done in theory is to classify the entire highway system of the state into one-mile segments, compute the relative distributions of accidents on each segment during the past year, and list them in order of accident densities. This would provide a list of highway segments in descending order from the most dangerous to the least dangerous.

The mechanics of such a plan were considered at length, but the amount of work involved, if computations were to be done by hand, was too great to be considered. Finally the process was reduced to a form which could be handled by an IBM 650 medium speed digital computer.

Basic Computational Methods

The entire highway network of the state is divided into a series of relatively small segments. In theory any size segment of highway, from ¼ mile to 100 miles in length, may be used for testing. As a matter of convenience, the unit selected for testing was the distance the highway ran through a single township. The average township segment in Wisconsin is about six miles in length. Each numbered highway in the state is sectionalized into township segments. Where a single highway carries more than one route number, federal highways take precedence, according to convention. In those cases where the highway carries two numbered state routes, the lower-numbered highway takes precedence.

Need Equalization Factor

Because township boundaries are used to designate highway segments, and such segments are not all equal in length, it is necessary to use some type of equalization factor. Otherwise what we tend to measure is the greater opportunity for accidents to occur on a long section of highway as compared with a short section. The equalization factor used is the number of actual miles in the segment to the nearest hundredth of a mile. Mileage is divided into the total number of accidents and a rate expressing the number of accidents per mile of highway derived. Thus, for a stretch of highway 7.23 miles in length that has had a total of 22 accidents for the time period under examination, the number of accidents per mile is 3.0428.

If the time periods during which accidents occurred are the same for all segments, we have a rate which is directly comparable for all segments. If, for example, another segment shows a rate of 6.0856 we can say this second segment is twice as likely to have an accident as the first.

The second factor that must be equalized if the different segments are to be directly comparable is the time period during which the data are collected. Any fixed time period, such as a year, may be used, although it should be long enough to allow sufficient accidents to accumulate, yet short enough to reflect current changes.

In the present program it was decided to use a rate based upon the number of accidents per mile of highway per month. The computation of this rate is an extension of the example already given. Let us assume our data cover a 12-month period. We already have the number of accidents per mile of highway, $22 \div 7.23 = 3.0428$. We now divide by 12 and obtain $3.0428 \div 12 = .2535$. The decision to

use a rate based on the number of accidents occurring per mile of highway per month was based on the need for flexibility. With such a rate the highway system may be examined as often as once a month to determine whether there have been any changes in the accident pattern. It also permits the use of data extending over a variable length of time such as 12 or 18 months, since the rate reflects monthly experience and provides a basis for determining when the accident experience on a given segment has changed sufficiently to warrant attention.

Average of Monthly Rates

One excellent way of determining whether the accident rate on a given highway segment is undergoing real change, as opposed to chance variation, is to use a method which corresponds to taking the average of a series of monthly rates. This concept may be slightly difficult to grasp at first so a few simple examples may help. Let us take a highway segment at random from somewhere in the state highway system. Assume that the segment we have selected is 5.29 miles in length. During January this segment had a total of 14 accidents, producing an accident per mile per month rate of 2.6465, computed by $\frac{(14 \div 5.29)}{1} = 2.6465$. You will note that we divide the mileage rate by 1 since there was only one month in the sample.

If we compute the rate for this segment for February, March, April, and May as the data become available we might have the following set of computations:

February $\frac{18 \div 5.29}{1} = 3.4026$

March $\frac{9 \div 5.29}{1} = 1.7013$

April $\frac{12 \div 5.29}{1} = 2.2684$

May $\frac{22 \div 5.29}{1} = 4.1588$

We now have five rates, based on the number of accidents per mile of highway for five different months on the same segment of highway. None are the same and the extreme differences extend from a rate of 4.1588 in May to a rate of 1.7013 in March. We would suspect that what we see here are normal changes in accident occurrence due to differences in seasonal traffic flow, weather, and chance factors.

From a practical standpoint we are more concerned with real changes than with those that result from recognized and uncontrolled factors such as weather and season. One way that we might determine what the true rate on a given segment should be is to take an average of several monthly rates. In our example:

January	2.6465
February	3.4026
March	1.7013
April	2.2684
May	4.1588
Total	14.1776

We may now compute the average as:

Average $= 14.1776 \div 5 = 2.8355$

Thus, we have a rough representative measure of the true rate of the segment that takes into account both the high and low values in the series.

Simpler Method

As a practical matter there is a method which accomplishes the same purpose in a slightly different and, for our purpose, easier manner. Returning to our example, instead of computing the accidents-per-mile rate each month we could have added all the accidents for each month together, divided by the mileage, and then by the number of months involved. Let us see how this works:

$14 + 18 + 9 + 12 + 22 = 75$ Total Accidents

$\frac{75 \div 5.29}{5} = 2.8355$

If you will compare this answer with the one obtained, calculating the average rate from each month separately, you will note the answer is the same.

If we extend the number of months in the sample to 12, 18, or even 24 months, we get a rate which is more representative of the true accident density than when we use only a month taken at random. We may now illustrate an application of this principle which is used in the

method under discussion.

By selecting an arbitrary time period (in our example, five months) we may employ what statisticians refer to as a moving-average method of picking out real changes that occur in the accident experience on individual highway segments. Returning once more to our example, we have already computed the average accident rate per mile per month, using the five months, January to May, as follows:

$$14 + 18 + 9 + 12 + 22 = 75$$

$$\frac{75 \div 5.29 = 2.8355}{5}$$

When the number of accidents for June becomes available, we may repeat the process, dropping the month of January and replacing it with June. Working this out in detail and assuming that we have 20 accidents in June we get:

$$14 + 18 + 9 + 12 + 22 = 95 - 14 = 81$$

$$\frac{81 \div 5.29 = 3.064}{5}$$

New Average

You will note that we added the number of accidents for June (20) and subtracted the number that occurred in January (14), giving us a new average for the most recent five-month period. Since these averages are far more stable than individual monthly rates, large changes between one period and the next may be regarded with a somewhat greater degree of suspicion. What constitutes a large change must be decided by an evaluation of the behavior of accidents in the system under study. In the program we are discussing any change in rate between periods in excess of .3000, plus or minus, is considered grounds for taking a special look at the segment involved.

In the Wisconsin setting, the standard procedure is to examine the entire highway system every three months to determine whether any changes have taken place. The length of time covered is the most recent 24-month period. Each time the system is examined the program automatically adds the most recent three months and deducts the oldest three months, thus providing a picture of the relative distribution of accidents during the most recent 24-months, as well as changes in the individual segment.

Each segment of highway is represented by a single IBM card which contains the following information:

1. The number of accidents for each three-month period broken into fatal, personal injury, and property-damage categories contained in columns 6 to 46.
2. The number of miles in the segment in columns 47-50.
3. The total number of accidents by each severity class for the most recent 24 months as follows:
   a. Fatals—cols. 51-52
   b. Personal Injuries—cols. 53-55
   c. Property Damage—cols. 56-59
4. The rates for the most recent 24 months by the following severity classes:
   a. Fatal and Personal Injury combined—cols. 61-63
   b. Property Damage—cols. 64-66
   c. Total Accidents—cols. 67-70
5. The identification of the particular location as follows:
   a. Route Number—cols. 71-73
   b. Section Number—cols. 74-76
   c. County—cols. 77-78
   d. Township—cols. 79-80

Information on Card

Each card is interpreted so that the information desired appears printed on the top of the card. Cards are filed by route number in order, beginning at one end of the route and extending to the other. For example, the cards for highway 41 would appear as follows:

Highway No.	Section	County	Township
41	1	Kenosha	Heath
41	2	"	Ames
41	3	"	Pleasant
41	4	Racine	Lancaster
41	etc.	etc.	etc.

etc.

Highway sections are filed in sequence from south to north and east to west, whichever is appropriate. These files serve as a ready reference to the accident history of any segment(s) of highway in

Program Operation

Every three months the accident experience for the current period is punched into columns 1-5 of the master card. When the current data for all segments have been added the cards for the entire highway system are fed into a 650 computer at the rate of 200 per minute. As each card goes through the computer, the following operations are performed:

1. The oldest quarterly data are subtracted from the total accident-by-severity category and the most recent three month data is added to the totals and placed in the proper position in an output card.
2. New accident rates consisting of the number of accidents per month per mile of highway are computed using the current data, and placed in their proper position in a new card.
3. The quarterly accident totals are moved to new positions in the output card with the oldest quarter being dropped and the others moved five positions to the right into their proper location and placed in the new card.
4. The new rates based on the 24-month moving average are compared with the old rates to determine whether there has been a change large enough to require special attention.
5. If there has been a change large enough, it punches out a specially-marked card giving the following information:
   a. Present rates
   b. Previous rates
   c. Amount of change, plus or minus
   d. Complete identification as to location
6. In either event it punches out a card containing the same data in the same form as the original card, except that the data are current. This card then goes into the file and is used both as a reference source and as input for the next examination of the highway system.

This entire operation, including the punching of the new cards, takes approximately ¾ of a second, making it possible to process 80 highway segments per minute. When the operations are complete, the special cards indicating changes have taken place can be sorted out and listed mechanically for special examination.

A work-saving feature of this system is that the new output cards are ready to be used as input for the next examination of the system merely by placing the next three months' data, when available, in columns 1-5. This may be done manually or by means of a mechanical tabulating setup, depending on the volume of cards to be processed.

Uses of Data

The most important advantage in such a system is the wide flexibility made possible by mechanical methods. Each card in the system provides a ready reference for a particular segment of highway, providing a history of experience for 24 months, as well as current rate data. Any single segments may be located quickly, and its present condition and past behavior examined.

The use of special output cards for segments which have shown sufficiently large changes in their basic rates, insures that trouble spots are automatically brought to the attention of the planner and administrator without tedious manual examination of a large number of cards or poring over maps of the highway system.

In addition, because the data are already in punched-card form, a great variety of operations can be performed quickly with mechanical and electronic equipment. Some of the more useful things that can be done are:

1. Segments can be sorted into order and mechanically listed in order of severity from the worst to the best.
2. All highway segments that have a rate higher than an arbitrarily selected one can be sorted out and examined using mechanical sorting equipment.

(Continued on page 40)

CALDWELL APPOINTED DIRECTOR OF TRAFFIC INSTITUTE

BERNARD R. Caldwell has been appointed director of the Traffic Institute Division of the Transportation Center at Northwestern University, President J. Roscoe Miller has announced.

One of the nation's foremost police administrators, Caldwell had been commissioner of the California Highway Patrol until his retirement last March.

In announcing the appointment, Dr. Miller said: "During his long career in the field of traffic law enforcement, Mr. Caldwell has made outstanding contributions to motor vehicle traffic safety.

"His experience and ability make him eminently qualified to guide the Traffic Institute's program," he added.

As a graduate of the Institute, Caldwell will be returning to familiar surroundings when he assumes duties as administrative head, effective January 15. He is a member of the 1937-38 class in Traffic Police Administration.

Commenting on the appointment, Franklin M. Kreml, director of the Transportation Center, of which the Institute is a division, said:

"Commissioner Caldwell will bring to the important work of the Traffic Institute the rare combination of proven administrative ability, technical competence, and dedication to the principles and objectives of the institution.

"It is especially gratifying to have the administration of the Institute in the hands of one of its most successful graduates. A man who has contributed so greatly to the attainment of its objectives over the years."

Throughout most of his police career, the new director has devoted his energies to the reduction of traffic accidents through better law enforcement procedures.

He began his career with the Los Angeles police department. Promoted up through the ranks of sergeant, lieutenant, captain, and inspector, he became deputy chief in 1941 and assumed command of the city's newly centralized traffic bureau.

Under his administration of the traffic bureau, Los Angeles won first place among cities of 1,000,000 or more population in the national traffic safety contests of 1949, 1950, and 1951. The city also received first place awards in traffic law enforcement competition sponsored by the International Association of Chiefs of Police for the same years.

He was appointed commissioner of the California Highway Patrol in 1953, serving until his retirement in March, 1959. During his term at the head of the patrol, he continued his efforts toward the safer and more efficient movement of traffic through improved law enforcement.

In 1958, for example, fatal traffic accidents in areas covered by the highway patrol declined by 6.3 per cent over the previous year. It was the second straight year that deaths in patrolled areas were reduced, despite a considerable increase in traffic volumes.

A member of the International Association of Chiefs of Police, Caldwell served as chairman of the association's traffic committee in 1956, 1957, 1958.

Caldwell is the third director in the Institute's 23-year history. Franklin M. Kreml was the founder and first director of the Institute in 1936. Ray Ashworth assumed the post in 1956 when Kreml became the first director of the newly established Transportation Center at Northwestern University. Ashworth resigned July 1, 1959. Robert L. Donigan, general counsel of the Institute, has served as acting director in the interim.

Announcement of Caldwell's appointment received enthusiastic endorsement from leaders of national organizations concerned with traffic safety.

Russell I. Brown, president of the Insurance Institute for Highway Safety, said:

"Mr. Caldwell's appointment will be universally acclaimed in the accident prevention field. He stands high among the men in this country with the necessary qualifications to guide the Traffic Institute's important work."

Col. C. W. Woodson, Jr., superintendent of the Virginia State Police and president of the International Association of Chiefs of Police, added his congratulations:

"Mr. Caldwell steps into a new stage of an already fine career, during which he will certainly add many new accomplishments. By this appointment the Traffic Institute, which has made such substantial contributions to the improvement of official programs in motor vehicle traffic, guarantees that it will continue its services in this field at a high level of excellence."

Joseph O. Mattson, president of the Automotive Safety Foundation, stated:

"Mr. Caldwell for many years has been one of America's outstanding police traffic administrators and has made major contributions to the improvement of traffic law enforcement policies and procedures. His new appointment as director of the Traffic Institute is a ten-strike for the Institute and the cause of safe and efficient automotive traffic." ★

TRAFFIC TRAINING CALENDAR

FEBRUARY 1-5: Western Region Traffic Court Conference; University of Southern California, Los Angeles, Calif. For judges, justices of the peace, prosecutors, lawyers, court officials, and selected police officers. Held in cooperation with the Traffic Institute and the American Bar Association Traffic Court Program.

FEBRUARY 4-5: Western Region In-service Training Conference for Graduates of TPA Training Program and Their Chiefs; Los Angeles, California. Discussion centers on current traffic problems and their solutions.

FEBRUARY 29-MARCH 18: Personnel Management for Police; Traffic Institute, Evanston. Comprehensive treatment of such personnel management techniques as recruitment, examinations, training, assignments, and promotion and performance evaluation. Designed to aid officers administering personnel policies within the framework of existing local or state laws and regulations affecting these policies.

MARCH 7-25, 1960: Traffic Engineering Seminar; Traffic Institute, Evanston. The seminar is designed to meet training needs of state, county, and city traffic engineers and others *with engineering backgrounds* who work in areas closely related to traffic engineering. Study areas are: Methods of Research and Analysis; Regulation and Control Techniques; Planning for Future Growth.

MARCH 7-25, 1960: Accident Investigation—Administration and Techniques; Traffic Institute, Evanston. This course covers the application of data gathered at accident scenes to accident prevention. Training and supervisory methods are included.

KNOW THE LAW

Rights and Liabilities Of Examiners, Instructors In Road Test Accidents

BY ROBERT L. DONIGAN, General Counsel
and EDWARD C. FISHER, Associate Counsel
The Traffic Institute

EXAMINATION of applicants for an operator's license offers a necessary means of assuring that operators of motor vehicles are qualified to drive them on the highways. Proper conduct of such an examination involves road-testing of the driver under actual conditions of traffic in order to determine his competency. Additional efforts to insure safe drivers are made in the driver education courses now quite prevalent in our high schools. Interest in such courses continues to expand, as witnessed by the fact that recent legislative sessions in several states have approved measures increasing the scope of high school driver training courses and providing for their financing.[1] Recognition of such courses is given in some statutes by permitting one who has successfully completed such a course to qualify for an operator's license at an earlier age than he might otherwise do.[2] The proper conduct of such courses likewise requires "behind-the-wheel" experience by the pupil, under the supervision of his instructor.

With increasing interest and activity in each of these areas the question sometimes concerns driver training instructors and driver license examiners when conducting road tests: What are their rights and liabilities in the event the vehicle driven by the pupil or license applicant becomes involved in an accident? This inquiry points in several directions: (1) in case of suit by the pupil or applicant against third persons, (2) when the other party whose person or property is damaged brings suit against the applicant or pupil *and* the examiner or instructor, and (3) when the suit is between the pupil and his instructor or the examiner and the applicant. In some of these areas the reasoning must be by analogy to other similar legal situations.

If liability is to be fastened upon the instructor or examiner in such cases it must find its basis in the familiar doctrine of negligence. This is the legal principle by which one may incur liability for injury caused by his failure to exercise that degree of care which the law requires under the particular circumstances. The elements of such liability are, (1) a duty owed by the defendant to exercise due care under the circumstances, and (2) a breach of that duty whereby (3) damage or injury is proximately caused to the plaintiff.[3] There are various degrees

1. Public financing for driver education programs is provided in the following states: California, Connecticut, Delaware, Florida, Illinois, Indiana, Louisiana, Maine, Michigan, New Hampshire, North Carolina, Oregon, Pennsylvania, Utah. (From "Special State Financial Support for Driver Education," distributed by National Commission of Safety Education, National Education Association, Washington, D. C.)
2. For example, in Maine the applicant who has completed a high school driver training course can be granted a license at age 15, otherwise he must be 17. (Law effective September 1, 1960). Michigan law (1957) prohibits issuance of an operator's license to any person under 18 "unless such person shall have successfully passed a driver education course and examination given by the public schools or by some agency offering a course recognized by the department of public instruction as equivalent thereto." This permits a person so qualified to be licensed at age 16, or to have a restricted license at age 14. (MSA 9.2002, 9.2311(f).) In Wisconsin, where the general licensing age is 16, "application can be made by a person 15 years of age or older who is enrolled in a driver education and training course in any school and who, except for his lack of training in the operation of a motor vehicle, is qualified to obtain a license."
3. 65 C.J.S., Negligence, secs. 4a, 4c, 6, 104; 38 Am. Jur., Negligence, secs. 12, 25, 49.

of care which one may owe to other persons. For example, one who carries goods or persons for hire is held to a *high* degree of care for their protection. But toward persons who come upon one's premises uninvited, only *slight* care is required. In most of the negligence cases, however, the standard of care required is ordinary care, or, as sometimes expressed —*due care.*

The test applied to determine if the defendant has exercised due care is the standard of the reasonable and prudent man. If the defendant has behaved as a reasonable and prudent man would under the same or similar circumstances, then he is absolved from negligence, but if he fails to live up to this standard, he may be held liable for the consequences of his acts.[4] Where the actor has special skill, the definition of the reasonable and prudent man includes those special skills or abilities. For example, a doctor is held to the same standard of care as a reasonable and prudent doctor would be expected to exercise under the circumstances. The circumstances under which the person must operate have an important bearing upon the degree of care which he is bound to exercise. Thus police officers who operate motor vehicles on the highways in the performance of their often hazardous duties are held only to that degree of care which a reasonably prudent man would exercise in the discharge of official duties of a like nature under like circumstances. Obviously his duties frequently require him to take risks and drive in a manner forbidden to the citizen-motorist.[5]

The law further recognizes that one other than the actor may be held responsible for injuries sustained. Thus the law provides for an indirect or *vicarious* liability on the part of anyone having legal control of another for acts committed by the latter. Under this rule the operator of a business is liable for injuries caused by the negligent acts of his employee, occurring within the scope of his employment. For example, a trucking company is held liable for the negligence for its driver resulting in damage or injury, provided the driver's acts or omissions occur while in the performance of duties for his employer. Liability is imposed because of the legal relationship existing between the parties; the act of the agent or servant while performing the master's work is held to be that of the latter. This is called *imputed* negligence. In many jurisdictions it has been extended to include liability of the head of a family for negligence of members of his family in driving an automobile which he has provided for them. This is the familiar "family purpose doctrine" of liability—they are using his car for the purposes intended by him.[6]

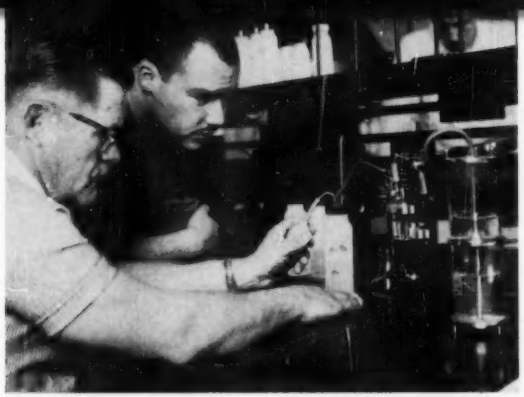
Apart from liability arising through relationship created by law, a person may so conduct himself as to incur legal responsibility where none would otherwise follow. For instance, one may subject himself to responsibility where he negligently intervenes in matters which do not legally concern him, as where he takes it upon himself to direct the movements of another,[7] or assumes to care for an injured person who is a stranger to him. In all such instances the law imposes an obligation upon him to act carefully in what he does. In other words, the law imposes the duty upon him to use due care in what he has undertaken gratuitously.[1,7] In such instances he becomes directly liable for his own negligent acts; liability is not *imputed* to him by reason of any pre-existing relationship, such as principal and agent, master and servant, parent and member of the family, etc.

Although behind-the-wheel driver instruction and road testing of driver license applicants has become commonplace, very few cases are found bearing directly upon the point of liability of the instructor or examiner riding with the driver.

(Continued on page 31)

4. Id., C.J.S., sec. 1a(4); Id., Am. Jur., sec. 29.
5. "Police Liability in Line-of-Duty Accidents," Know the Law, Traffic Digest & Review, Sept. 1958.
6. 5A Blashfield, Cyclopedia of Automobile Law and Practice, sec. 3132.
7. See note: "Driver Liability in Signalling," Traffic Digest & Review, Nov. 1959, p. 17, citing note: 48 ALR2d 252.

7.1. TRAFFIC ACCIDENT INVESTIGATOR'S MANUAL, pars. 13.405-13.490.



STANDARD FOR CHEM TEST TECHNICIANS

NSC committee establishes minimum training and inspection requirements for operators of breath-alcohol devices

MINIMUM standards for the selection, training, and control of operators of breath alcohol tests have been established by the National Safety Council's Committee on Alcohol and Drugs.

The standards were developed by a subcommittee composed of some of the nation's top authorities on chemical tests for intoxication.

In the sub-committee's recommendation to the Committee on Alcohol and Drugs, Dr. Robert B. Forney, chairman, stated: "The success of a chemical tests for intoxication program depends on the competency of the operators both to perform the tests and to present the evidence in court. It is vital that qualified persons be selected for this assignment and their continued proficiency be insured."

Two courses of action were recommended by the sub-committee to achieve this purpose.

1. *Certification:* It is evident that properly trained personnel are essential to carry out the aims of the program. If body tissues or fluids are to be analyzed directly, the prerequisites to training must be a college degree in science. If breath methods only are to be employed, the candidate for training must demonstrate proficiency in arithmetic. Training of such individuals will require a minimum of 44 hours of instruction and must cover the following points:

1. Fundamental principles involved in the tests to be employed.
2. The precision and specificity of the tests.
3. Sources of error and their avoidance.
4. Proper use and maintenance of equipment.
5. Checking reagents for purity and strength.
6. Proficiency with blanks, known and unknown laboratory samples and human subjects.
7. Responsibility for and presentation of evidence in court.

To be certified, the candidate must also have had sufficient experience under the supervision of a qualified person to: 1. express his findings in terms of the minimum quantity of ordinary alcoholic beverage in the body at the time the sample was taken; 2. express an opinion regarding the influence the alcohol, which was found, had on the subject, based on the results of the tests, the condition of the subject, and knowledge of pertinent literature.

Candidates who can meet the minimum requirements should then be cer-

(Continued on page 30)

POSITION . . .

(Continued from page 8)

Center line—"A marked center line . . . . . of a roadway." (From *Highway Capacity Manual).* Center lines have the same number of traffic lanes on each side. They designate the traffic lanes available in each direction and so serve the purpose of a *divisional line.* Three-lane roads, which are rarely being built today, do not have center lines because the middle lane is for use by traffic in either direction. On roads with four or more lanes, the center line is often also a *barrier line.* Center lines are not used on one-way roads because traffic is in only one direction. The *standard* center line is white and is often reflectorized to make it more visible at night. It is usually a "dashed" or interrupted line. Where speeds are high, 15-foot line segments are separated by 25-foot gaps, as shown in Exhibit 3. In cities where speeds are low, the lines and gaps are shorter and may be as little as four feet each as shown in the same exhibit. At approaches to intersections, railroad grade crossings, and other places where they are important, or where cars are likely to have to stop, center lines may be continuous white lines. Where lane lines are used, center lines may be either unbroken white lines or *barrier* lines to distinguish them from lane lines.

Lane line—"A line other than a center line separating two traffic lanes." (From *Manual on Uniform Traffic Control Devices for Streets and Highways).* Lane lines separate traffic going in the same direction. They are used commonly on three-lane rural roads to mark the center overtaking and passing lane clearly. They are also used on roads having two or more traffic lanes in one direction especially on curves, approaches to intersections, at hill crests, and where roadway width changes. The *standard* marking for lane lines is the same as the standard marking for center lines, a broken white line. See Exhibit 4. Solid lines are not often used for lane lines. When used they are white.

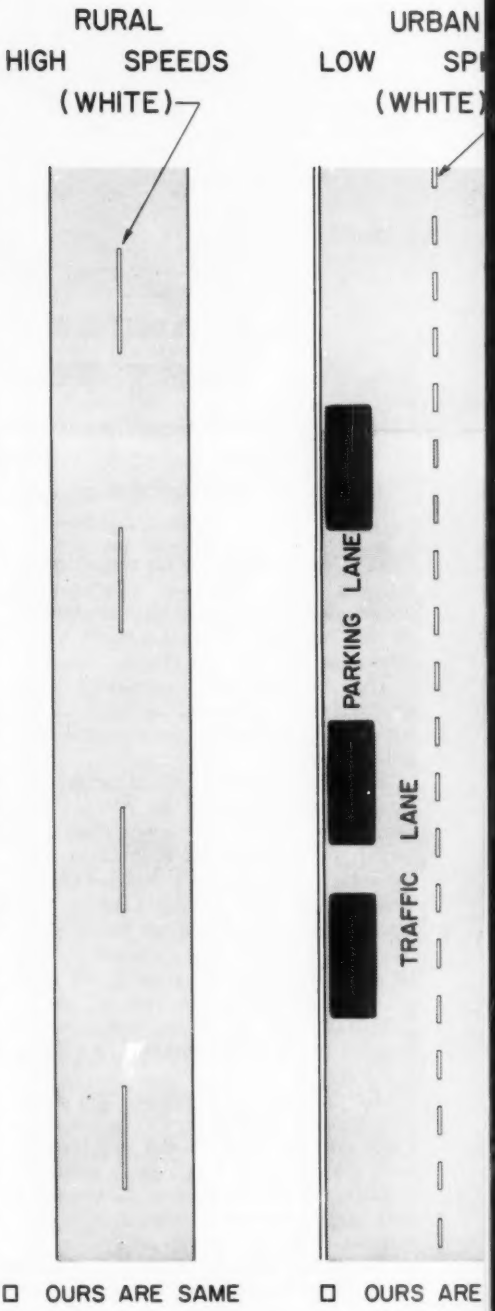
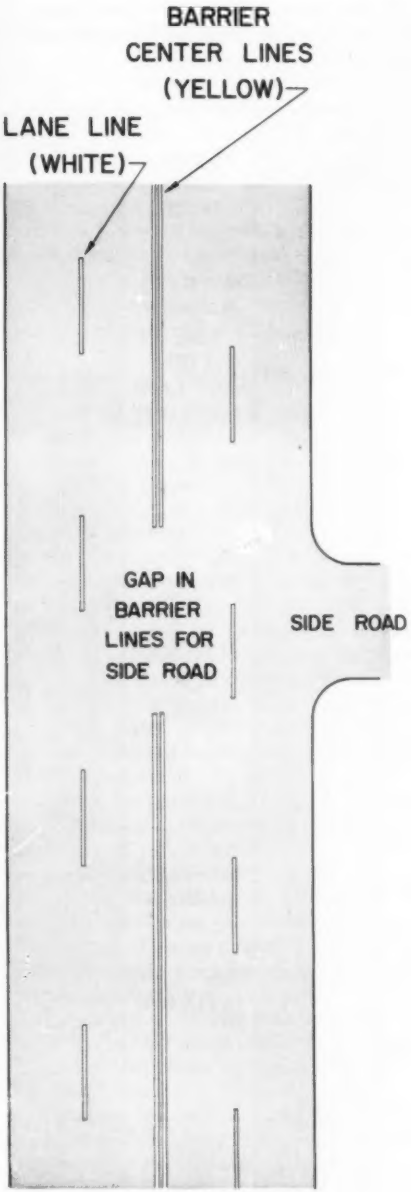


EXHIBIT 5: This street has two lanes in one direction and one in the other with a division line separating them. This division line is not a barrier line. It may be crossed for overtaking.

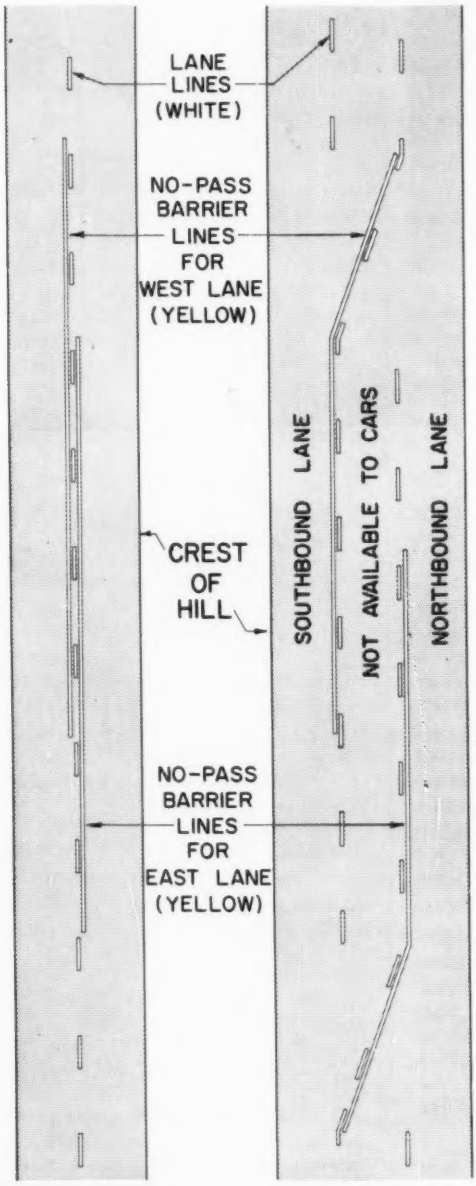
Divisional line—"A line that designates the lanes available for traffic moving in each direction on an undivided roadway and that is to one side of a center line." (From *Highway Capacity Manual).* A divisional line has more traffic lanes on one side of it than on the other, usually to accommodate more traffic in one direction than the other. It may be a *barrier* line but is not always one. Divisional lines are not standardized to the same degree as other pavement markings, but they are usually single yellow lines *not* adjacent to a lane line, as in Exhibit 5. They are usually used on streets where the lanes on one side are marked by lane lines.

Barrier line—"A distinctive longitudinal pavement line which, when placed in proper relation to a normal center line, lane line, or other barrier line, indicates that all traffic must keep to the right thereof." (From *Manual on Uniform Traffic Control Devices for Streets and Highways).* A barrier line

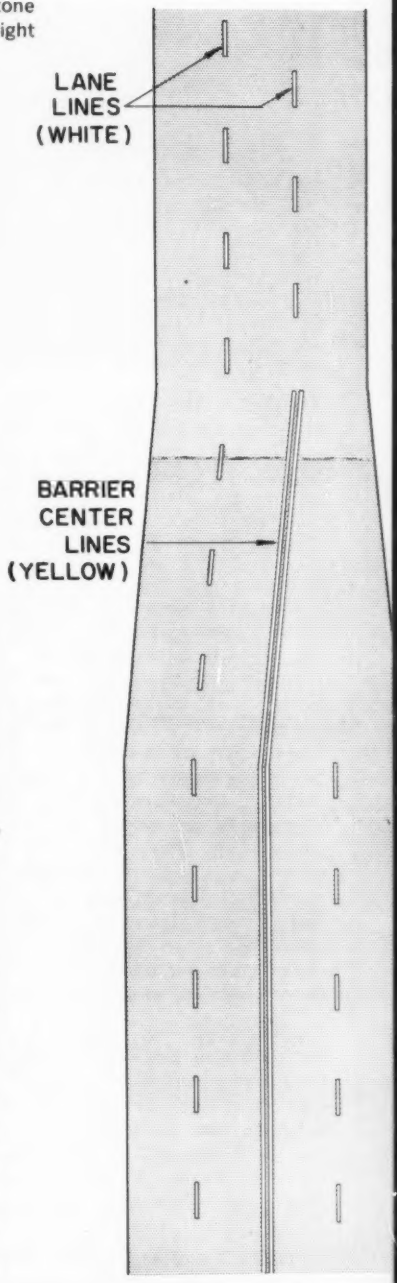


EXHIBITS 3 and 4: Standard center line markings are shown in the drawing at left. Standard markings use to designate lane and barrier lines are shown at right. Compare with those in your jurisdiction.

EXHIBITS 6 and 7: Barrier line markings at no-passing zone (left) and barrier lines where pavement narrows (right drawing).


LANE LINES (WHITE)
NO-PASS BARRIER LINES FOR WEST LANE (YELLOW)
CREST OF HILL
NO-PASS BARRIER LINES FOR EAST LANE (YELLOW)
SOUTHBOUND LANE
NOT AVAILABLE TO CARS
NORTHBOUND LANE

□ OURS ARE SAME



□ OURS ARE SAME

□ OURS ARE SAME

serves the purpose of a fence or barricade and every vehicle must stay to the right of it. Sometimes temporary barrier lines are marked by a series of traffic cones or wooden barriers on horses or other supports. Barrier lines are used most frequently in no-passing zones at hill crests. In this case they are next to a center line or substitute for it as on the left road in Exhibit 6. On three-lane roads at hill crests, and also on "blind" curves, barrier lines designating no-passing zones are next to lane lines and so set apart the middle lane for some distance as a "no-man's" land not available to traffic, as in Exhibit 6. Barrier lines are often used for center lines or divisional lines on roads with two or more lanes for traffic in each direction as shown in Exhibits 4 and 7. In this respect they prohibit use of the left side of the road for overtaking and passing. Barrier lines are also commonly used, generally in connection with lane lines, where the pavement narrows or widens as in Exhibit 7 and at approaches to safety zones or other obstructions in the road. The *standard* barrier line is yellow, often reflectorized and always combined with a center line (as in left part of Exhibit 6), a lane line (as in right part of Exhibit 6) or as a double line (as in Exhibits 4 and 7). The barrier line applies only when it is to the right of the center or lane line, "on your side of the other line," or "in your lane." This is necessary because at certain points on approaches to hills and curves, traffic in one direction must keep to its own side of the road whereas traffic moving in the opposite direction with adequate sight distance need not do so. Because drivers are expected to stay to the right of barrier lines, those lines are discontinued at intersections (as in Exhibit 4) where it would be necessary to cross them in making a left turn. Sometimes barrier lines have no gaps at private drives into which left turns across the lines are permitted. There should be gaps at such places. Do not consider crossing a barrier line for a left turn into a driveway a violation unless it is at a point where the view is so obstructed as to make such a turn hazardous.

Designation of traffic lanes is usually by painted lines as described under the definitions of such lines. The lines described here are *standard* lines. Your state or city may use other designations which are not standard. You must know the exact meaning of the lane markings used in your territory. If they are the same as the standard, put a check in the squares below Exhibits 3, 4, 6, and 7. If they are *not the same* draw the kinds of pavement lines used in your territory in the margin and label each kind.

Significance of Control Devices

Legal Status of Markings. In many places, traffic authorities have designated lanes for travel by lines painted on the pavement or by other means. These are to help drivers and enforcement officials quickly recognize the required positions on the road at that point. These lines are placed under authority granted by laws or ordinances and so, for practical purposes, have the effect of law. Where there are such markings you may use them as a basis for traffic law enforcement and judge the position of the vehicle with respect to them. These special markings, therefore, permit more precise and equitable enforcement. Generally pavement markings designating lanes for travel are placed where it is especially important that drivers follow certain paths on the road for their own safety.

Traffic lanes may be designated by devices other than pavement markings. Traffic cones, or barricades, also may be used, especially for temporary markings. Sometimes signs are used, especially for no-passing zones, and particularly where snow often obscures pavement markings. Signs and pavement markings both have the same effect.

Direction of travel on a road is not usually indicated by signs on divided highways or boulevards where the two roads are separated by a median. Because a driver entering such a highway at a junction is able to see its dual character clearly, he is expected to know that he may not turn left into the road before the median and may not turn right into

the road beyond it. Hence, signs are not used. For one-way streets, however, signs designating the permitted directions of travel are necessary to inform drivers of what they may or may not do. These may be signs showing the direction of travel permitted on the street or road, they may be signs prohibiting turns which would lead to travel in the wrong direction, or both. In addition, traffic signals at junctions with one-way roads may show green arrows which indicate only the permitted movement.

Situations Affecting Your Procedure. You must assume that the driver knows what he is supposed to do. First, it is assumed that when a driver is licensed, he knows the basic rules of the road in the locality in which he is driving. These rules describe where he may and may not drive on the road. Second, each driver is expected to recognize marks on the road and signs indicating the proper position of the vehicle and know what to do when he sees them.

Control devices that are not functioning properly present problems in enforcement. The problems differ, however, depending on which of two purposes is served by the control device:

1. The control device is *essential to regulate* driver behavior. This is the case with one-way streets, off-center divisional lines, and barrier lines. The driver who is unfamiliar with an area cannot know what he is required to do unless there is something there to tell him.
2. The control device is *only an aid* or reminder to the driver to do or not to do something which he should know about even without the signs and markings. This is the function of signs reminding the driver to "keep right except for passing", center lines on two-lane roads, no passing zones on hills and curves, and other similar reminders.

When an essential control device is not operating no enforcement action can be taken because one of the elements of the violation is that the driver be informed by the sign or pavement marking what is required of him. Sometimes you may have difficulty deciding whether the device is functioning properly.

If the only control device at the location is simply not visible to the approaching driver do not take enforcement action. This will be the situation when the sign has been knocked down, or carried away, and when the controlling pavement marking is covered with snow. Where several signs have been erected and it is reasonable to assume a driver will notice at least one, take action if any one of the signs is visible to him as he approaches the location. Signs are duplicated so that if one fails, the other will serve.

If the *only* visible control device is *partly* obscured, you have to decide if it still serves its purpose. The most common instance is when the barrier line is badly worn and not conspicuous, although still visible. Another example is the one-way sign which is partly obscured by branches of a tree, blown snow, spattered dirt or other objects. Remember that some signs that are visible in daylight may be obscure at night. Therefore, determine the effectiveness of the control device *at the time of the violation.* If the violator claims he did not see it, take him to the point where he should have seen it and show him that it is visible or convince yourself that it is not. Take enforcement action unless the device is entirely ineffective.

Safeguarding Inoperative Essential Control Devices. If an essential control device is missing or partially obscured, it may be a hazard and you should take action as described in special instructions for protecting and reporting hazardous road conditions. This may involve anything from standing guard and directing traffic until the condition is remedied, to placing a sign back in its proper position.

Position on the roadway is much more important in some places than in others. Consider this carefully when evaluating a violation for enforcement purposes.

For example, suppose that a car is travelling exactly in the middle of a two-lane, two-way, unmarked road where the driver can see, his vehicle can be seen for half a mile in either

direction, and there is no other vehicle near. Although, strictly speaking, this is illegal, there is no *actual hazard*. But driving with any part of the vehicle to the left of the center at or near a hill crest, or any other place where the view is obstructed, is not only *illegal* but extremely *hazardous*.

You may modify enforcement action according to the degree of hazard present in each position violation. Action which includes both a hazard and illegal action would clearly warrant citation, whereas the act which is only technically illegal, but not actually hazardous, could be overlooked entirely or could be corrected by a warning if department policy permits. One point for consideration, however, is that a person operating across the centerline, illegally, but not actually in a hazardous location or situation is developing a bad driving habit. This bad driving habit could be carried over into the more hazardous situation. It should be called to the driver's attention before the more dangerous action occurs.

Detecting Violations

Careful observation during regular patrol is the usual way to detect most position and direction violations. They may be seen at any place and on almost any road. They are likely to occur at places where drivers habitually exceed the speed limit. Give special attention to points where violations would be most likely to create immediate hazards: at crests of hills, intersections, and curves. Presence of a barrier line should alert you especially to possible violation at that point.

Position and direction violations are continuing violations. Unlike failure to stop for a traffic light, they usually may be observed for at least five seconds and often for as long as a minute. Hence they may be detected by scanning traffic ahead moving in the same direction or approaching from the opposite direction.

Stationary observation has only limited application for such violations. Occasionally it may be worth while to park near the crest of a hill to watch for out-of-lane cars at that point, but the presence of your vehicle, if it is visible will usually deter violations. When stationary observation is used at an intersection to detect failure to stop for signs or signals and improper turns, certain position violations can also be watched for. Where there are special lanes reserved by signs or pavement markings for turning vehicles, look for cars using such lanes for straight-through traffic. Also where there are two lanes or more in one direction look for cars that stop so as to occupy both lanes as in Exhibit 8. This is failure to keep in lane. Such observation can often be made by patrolmen on foot.

If you are instructed to emphasize position violations, patrol in areas where there are many no-passing zones or frequent barrier lines.

Learn to visualize a vehicle path on the road when there are no other vehicles to interfere. Drive in that path yourself. Watch carefully any vehicle which leaves this imaginary path for any reason and especially when there is no reason. If the vehicle continues outside of this path, consider enforcement action. If it gets so far out as to be in an area of definite violation more than momentarily (let us say five seconds) take enforcement ac-

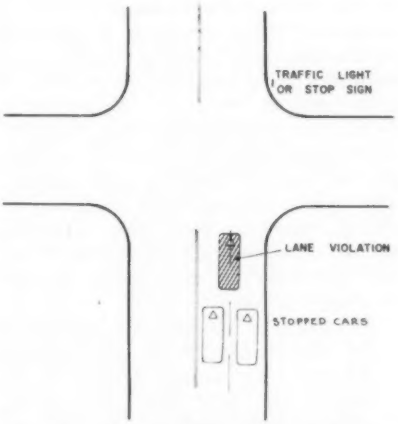


EXHIBIT 8: Blocking two lanes at a signal or stop sign is a lane violation and may be detected by stationary observation.

tion. Such paths will be described later and also illustrated in diagrams.

Where people purposely drive in the wrong direction on a road in order to take a shorter or more convenient route to or from a private drive, an entrance to a parking area, fields, or other roadside points, direction violations may be quite common. You can appropriately give special enforcement attention to such places even to the point of stationary observation at hours when, for some reason, you believe that the practice is common.

Detection in connection with accidents is often possible. Accident investigation techniques, which are the subject of a special manual for traffic officers, are required to secure evidence of such violations. Evidence of driving in the wrong direction is usually so clear in connection with accidents that the violator admits the offence. In practically every head-on collision or sideswipe, one or both vehicles were in an illegal position on the road, usually travelling on the left half of the road or on the wrong side of a barrier line. The violation may sometimes be difficult to prove because drivers will rarely admit the offense, but skillful investigation can usually uncover witnesses or circumstances necessary to secure conviction. Running into parked cars or off the road is often a result of failure to drive as much as practical within one lane, and the resulting accident may produce significant evidence of that violation.

Position violations resulting from evasive action taken to avoid an accident may be detected either by direct observation or in connection with accidents. Although these are technically violations, do not take enforcement action if you are convinced that the position was due to evasive action.

For example, suppose a driver finds a car approaching from the opposite direction encroaching steadily on his half of the road. The cars are on collision paths. Believing that the encroaching driver cannot or will not return to his own proper position in time to avoid collision, the other turns to his left half of the road in violation of the law. Enforcement action should be taken against the encroaching, not the evading, driver.

Duration and degree of violation must be carefully observed as part of detection. In testifying concerning position violations you must be able to say how much the car was out of line and how far the vehicle travelled in that position or how many seconds at what approximate speed. A foot over the line for only a short distance where there is potential hazard because view is obstructed is a more serious violation than three feet over the line for half a mile where sight distances permit a driver to see that there is no hazard for a long way ahead. In connection with an accident, any extension of any part of the vehicle beyond the marked line may be considered a violation, but proper evidence must be available before enforcement action is taken. In observed violations, especially where the roadway is unmarked, a foot or more beyond the imaginary center line is necessary to be sure the observation is reliable enough to warrant taking enforcement action. When you can see the driver through the rear window of the car, this distance is easy to judge. If the driver is over the center of the road or the barrier line, the car is too far to the left and he is in a position to see this clearly. This does not apply to trucks which are much wider.

Direction of Movement

One-way streets and roads will be discussed first because violations of law relating to direction of movement are easiest to detect. The vehicle is simply going the wrong way. Whenever a vehicle is going "against traffic" there is no doubt of a violation.

Turning Into a One-way Road. A vehicle going "against traffic" on a one-way road or street may be detected in the act of turning into such a road or after it has completely entered the road and is travelling along it. The turn may be made at an intersection, from a private drive or other entrance, or it may be a U-turn made in order to go back in the direction from which the vehicle came. If you ac-

tually see the turn made, it is usually best to charge the violator with making a prohibited turn rather than going the wrong way on a one-way road because that is the violation you saw committed and you may want to stop the vehicle before it has moved any appreciable distance on the one-way road. Sometimes courts hold that prohibited turns can be violations only where there are signs prohibiting them. If there is no sign at the point where the turn is made, keep the vehicle under observation until it has travelled at least 100 feet in the wrong direction and take enforcement action promptly for that offense.

Vehicles parked so as to be headed the wrong way on a one-way road must have been driven the wrong way on that road. Likewise vehicles parked so as to face on-coming traffic in the adjacent lane must have been driven on the left half of the road to be placed there. However, do not charge these offenses in taking enforcement action unless you actually see the vehicle in motion. Take enforcement action under laws regulating such parking. If there is no appropriate parking law, try to keep the car under observation until it is moved and proper charges may be made for direction or position violations.

Do not turn around on a one-way road to pursue violators in the wrong direction. You will be adding to the hazard. Try to detect them when they are far enough ahead so that you can flag them to a stop as you pass. Then park and walk over to them. If the vehicle does not stop, identify it if possible and try to intercept it by some other route or to communicate by radio with another patrol unit which may be able to intercept as described in instructions for general traffic patrol. Because of the great element of actual or potential hazard involved in direction violations try to get the violator off the street or turned around before taking enforcement action.

Traffic Circles. One form of direction violation is the not uncommon act of driving to the left of a rotary traffic island. The island actually creates a one-way road all around it. Usually the distance driven is quite short and the driver is off of the circle before you can catch up with him. If not, get him off the circle and out of danger before you take enforcement action.

One-lane roadways. In some places a two-way road narrows to one-lane one-way because part of the road is closed temporarily for road repairs, or other reasons, or is permanently narrowed, for example by a one-lane bridge. Either situation then establishes a roadway capable of handling traffic in only one direction even if only for a relatively short distance. Since this road must be used by traffic in both directions, conflicts may occur. There is actually very little written in law regarding such a situation, especially as to which of the approaching vehicles has the right of way. Occasionally laws about reckless driving might apply if willful and wanton disregard for safety is involved.

If there is only one vehicle using the road, no problem is involved. If one vehicle has entered the stretch of one-way road, a second vehicle entering it from the opposite direction may be considered as operating in the wrong direction and enforcement action could be taken accordingly if the matter became an issue, provided the second vehicle could see the first was already in the road and provided you can determine which vehicle was already on the single lane stretch. When traffic is heavy at such a place or when drivers cannot see the entire length of the road clearly as they approach, traffic regulation must be undertaken. This involves directing traffic to let a group of cars go first in one direction and then another group in the opposite. In an emergency you may have to do this yourself to keep traffic moving; otherwise such action is usually performed by special traffic police assignment or by the people in charge of construction operations. ★

(Part 2 of this manual will be published in the February, 1960, issue of TD&R.)

EDITORIAL . . .

(Continued from page 2)

In order to fulfill the criteria of selective enforcement, a department must have all of the pertinent facts about accidents—about how, when, where and why they occur. This calls for effective accident investigation.

The department must maintain good accident records in usable form. This means they must be susceptible of, and subjected to, constant and critical analysis. As a result it is possible to give highly specific assignments to the police officers on the force. They can be assigned according to the incidence of accidents—by time, by place, and by the particular violations which should be given primary attention. The officers must be thoroughly trained and indoctrinated. They must know the techniques and procedures of enforcement, but in addition to this, they must understand the philosophy of enforcement and its real objectives.

In the light of rising exposure to accidents, which itself was a result of a constant increase in motor-vehicle registrations plus a rise in population, there tended to be wider and wider adoption of selective traffic law enforcement. In general, the public, including the communications media—i.e., radio, television, the press—have been, and continue to be, willing to support a high level of enforcement of the right kind.

With this growth of public acceptance, there has been, in many places, a disposition toward complacency; there has been a tendency to fall back into the old bad habits. Sometimes this occurs under the guise of selective enforcement, sometimes not.

The best evidence of ineffectual or improper enforcement practices appears in police records. There will be a preponderance of violations which are not of primary importance as causes of accidents. Similarly, there will be no relation between the violations shown and the times and places at which accidents are occurring.

What has happened in many cases is that those officials responsible for enforcement of traffic laws have lost sight of their real objective, which is to produce a safe condition on the streets and highways. The objective is not to undertake the hopeless task of attaining one hundred percent observance of traffic laws.

With no view here toward assessing blame, the reasons for this condition are worth examining. Essentially, there are three.

First, the implementation of a selective enforcement program of the highest quality entails a lot of work for everyone concerned — from the individual officer to the top administrator. It is natural for an officer to station himself at a spot where there tend to be many violations. Also, it is easier for his immediate supervisor to accept what appears to be a full day's performance. For both the tendency is to emphasize the *volume* of enforcement activity rather than to strive for quality.

At the same time, a department must maintain a sufficient quantity of enforcement if it is to have a meaningful impact on the accident problem. The difficulty arises when, in the absence of a high quality of enforcement, an attempt is made to improve conditions solely through increasing the quantity; when this happens the community will rebel.

It is difficult and expensive to embark upon the training and re-training programs necessary to produce a truly high level of enforcement quality along with an adequate quantity. However, if the quality of enforcement is good, and it is sustained, the community will, as time passes, require a relatively decreased *amount*. Good enforcement changes the traffic *mores* of the community. The trend is toward voluntary observances of the law. And this, after all, is what we really seek.

Secondly, the real goal of enforcement is lost sometimes because of zealous attention to the letter of the law rather than devotion and dedication to the cause of public safety. This is increasingly true since traffic safety has

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assumed such a large place in the public eye and the public mind. Zeal alone is destructive of good enforcement because it is motivated solely by the aim of an officer, or a public official, to build an impressive record in terms of short range results. Thus, the achievement of a "good" personal record becomes important to the officer's career, and to the official's reelection, but detrimental to the cause of safety.

This tendency is reflected in some of the extremely narrow tolerances adopted by some law enforcement agencies. Take the enforcement of speed laws, for example. Adherence to too-narrow standards leads inevitably to mistakes; mistakes lead to injustices; these are multiplied and exaggerated in the telling and the re-telling of the enforcement incident by the arrested driver, his family, his friends. As these events are multiplied, there is created further public resistance to even the best-motivated and, for that matter, the otherwise best-conducted traffic law enforcement program.

The third reason for the lowering quality of some of our traffic law enforcement is *inflexibility*. We must remind ourselves that the well-trained, well-supervised, well-led police officer has a complete set of enforcement tools which he should be using as appropriate to the particular situation. These are physical arrest, citations, warnings, instruction, and admonition.

Similarly, the courts have a whole repertoire of useful tools — i.e., jail sentences, fines, license revocation or suspension, probation, assignment to driver-improvement schools.

Because of the limitations on time available to them, the inadequate training in traffic problems experienced by most judges, and again, zeal—which has fed upon a general sense of public approval of traffic law enforcement—the courts have often failed to measure up to the demands of today's enforcement needs. They have, in many cases, failed to gear themselves up to a modern enforcement program with respect to the number of judges needed, the availability and size of courtrooms, proper rules of court, regular insistance on the presence of a prosecutor (to ensure that *both* sides of a case are adequately presented to the judge). These factors have led in turn, to the courts themselves being significant contributors to a heightened community resentment toward traffic law enforcement.

The central theme here is not the urging of less law enforcement: we have too little now. Rather, it is to urge more enforcement, but of a special kind. This is enforcement which has a single undeniable purpose—namely, the protection of the driving and walking public from the immediate and present danger of motor-vehicle traffic accidents.

If we do not get more enforcement of this kind, the accident situation will not improve; it will deteriorate.

Moreover, if, under the guise of providing this kind of enforcement, we do in fact have more *poor* enforcement, then the public will certainly rebel, and all traffic law enforcement will suffer to the great detriment of the safety of the nation. ★

CHEM TEST STANDARD

(Continued from page 19)

tified by a state agency with the authority to insure that all chemical test evidence accepted by the courts are obtained and testified to by a certificate holder. The certificate holder must be subject to periodic examination.

2. *Inspection:* The natural corollary program to that of certification would be the periodic inspection of equipment and certificate holders. Such inspections should be made under the direction of the state agency having the responsibility of certification. Inspections should be made at least semi-annually. The inspection program would insure the careful control of reagents, equipment and operators necessary to maintain high performance standards. In addition, inspectors would keep certificate holders informed of new developments in the field of chemical testing for intoxication. ★

KNOW THE LAW . . .

(Continued from page 18)

In one early California case the defendant, conducting a school for driver instruction, was held liable for damages resulting from a collision between a horse-drawn buggy and his automobile, driven by a student accompanied by an employee-instructor.[8] Such liability seems to have been fastened upon the school on the theory of negligence in permitting an incompetent driver to operate its vehicle, but the matter of the instructor's liability was passed over without significant comment.

In the absence of authorities bearing directly upon the subject of this article, reference must be made to cases dealing with parallel or similar situations to discover legal theories of law from which analogous principles may be deduced. A number of cases have arisen dealing with the liability of an automobile salesman who undertakes to teach his customer how to operate the car. In these cases liability frequently is imposed upon the dealer or owner of the car on the theory that the salesman-instructor failed to exercise due care under the circumstances. Also, the general rule seems to be that in cases where the negligent operation of a dealer's car by a prospective purchaser has occurred when the dealer or his agent was present in the car, the dealer is liable for harm resulting from such purchaser's negligence, since the latter is in effect the agent of the dealer, helping him sell the car.[9]

Cases such as these, however, are not of much assistance in determining the liability of the public school driver-training teacher or the license examiner in case of accidents occurring while the pupil or applicant is at the wheel. In these cases any negligence of the latter would not be imputed to the instructor or examiner, *since there is no relationship of principal and agent, or master and servant involved.* Liability of the instructor or examiner, if any, would necessarily be limited to his own personal acts or omissions which fail to measure up to the standard of care required of them as reasonably careful and prudent persons in the same or similar circumstances.

Several cases have been reported in which the liability of a licensee accompanying one holding a temporary (learner's) permit has been considered when the learner has been involved in collision while driving. The element of supervision inherent in this situation brings these cases into line with our present discussion, and their legal reasoning should apply with equal cogency.

A Rhode Island case characterizes the liability of the licensed driver accompanying the holder of a temporary permit in this manner:

> "When a licensed operator in the exercise of privilege granted by the statute, permits an unlicensed person to drive an automobile under his direction, he assumes the duty of exercising due care to prevent injury to persons and property by such unlicensed person."[10]

The statute referred to in this case was one allowing "any person over 16 years of age to operate a motor vehicle under the supervision of a properly licensed operator" provided the "licensed operator shall be in such position in the vehicle being operated as to readily control at all times the operation of such motor vehicle." Similar statutes have been enacted in several states.

In the case cited the defendant was a duly licensed operator of a motor vehicle who went out with an unlicensed person (Arzoomanian) to a local park, where he proceeded to give the latter a driving lesson. When they had reached a certain point, defendant, wishing to terminate the instruction, directed Arzoomanian to stop and give him the wheel. However,

8. Easton v. United Trade School Contracting Co., 173 Cal. 199, 159 P. 597, LRA 1917A 394 (1917).
9. Notes: "Who is responsible for injury by car during a demonstration or instruction by dealer?" 20 ALR 194, 50 ALR 1391, 31 ALR2d 1445.
10. Cullinan v. Kooharian, 51 R.I. 250, 153 A. 877 (1931).

Arzoomanian refused and immediately started the car and drove into another street. Defendant did not have an opportunity to leave the car before it was put in motion by Arzoomanian and when they headed for a sidewalk, he applied the emergency brake in an effort to stop the vehicle but was unsuccessful. The car hurtled onto the sidewalk and struck a pedestrian, who thereafter brought suit against the defendant, charging he was negligent in supervising Arzoomanian's driving. The pedestrian-plaintiff recovered judgment in the lower court, the trial judge basing his finding on the fact that defendant failed to prevent Arzoomanian from starting the car, as he could have done by applying the emergency brake or shutting off the ignition. On appeal the judgment was reversed by the Supreme Court, which said:

> "It was the duty of the defendant to have done everything that a reasonably prudent person would have done to prevent Arzoomanian from driving into Broad Street, and had there been sufficient time for action directed to this end after the refusal of Arzoomanian to surrender the wheel, it would have been a violation of his duty had he failed to take such action. A licensed driver permitting an unlicensed person to drive a car under his direction cannot relieve himself of liability by simply withdrawing permission to operate under his license. He must take such measures as the circumstances permit to prevent injury to the person or property of others which may result from the negligent or unskillful driving of an unlicensed person. In other words, he must exercise the control which the statute contemplates. In the instant case the defendant caused the car to be brought to a standstill on the crosswalk with the intention of driving the car himself on Broad Street. There is no evidence that he had any reason to believe that Arzoomanian would refuse to obey his instructions. As but a few seconds elapsed between the refusal of Arzoomanian to surrender the wheel and the injury to the plaintiff, and as the defendant, when he saw the car was out of control, applied the emergency brake, the defendant in our opinion did all that was required of a reasonably careful person under the emergency in which he found himself. He cannot be held liable for failure to have exercised the highest degree of care and skill."

Similar provisions are found in the Uniform Vehicle Code (1956), sec. 6-105, relating to issuance of instruction permits and operation of vehicles by persons learning to drive. Under statutes patterned after the Code, one holding an instruction permit may "drive a motor vehicle upon the public highways for a period of 60 days when accompanied by a licensed operator or chauffeur who has had at least 1 year of driving experience and who is occupying a seat beside the driver . . ." Provision is likewise made for issuance of instruction permits to persons "enrolled in a driver-education program which includes practice driving" whereby such permittee may "operate a motor vehicle only on a designated highway or within a designated area but only when an approved instructor is occupying a seat beside the permittee."

Speaking of a similar provision of the Maine statute, the Supreme Judicial Court of that state said in 1921:

"This provision was evidently intended to enable an inexperienced person to learn to operate a motor vehicle by operating it upon the supervision and instruction of a licensed operator. The words 'riding with or accompanied by a licensed operator' mean that the licensed operator shall ride with or accompany the unlicensed person, under such conditions and in such proximity that he can maintain the supervision over the unlicensed person necessary for safety, and render assistance, if need be, with reasonable promptness. Bourne v. Whitman, 209 Mass. 155, 165, 95 N.E. 404, 35 LRA (NS) 701. It is also clear that the unlicensed operator must be operating the vehicle in company with the licensed operator 'for the purpose of becoming familiar with the use and handling of a motor vehicle, preparatory to taking out license for driving,' not necessarily for

the sole purpose of becoming familiar with the vehicle, but that purpose must be present in his mind."[10.1]

As indicated earlier, whether an instructor or examiner is to be held liable for injuries caused by the negligent driving of the pupil or applicant, depends upon the circumstances. These may consist of a number of different factors and conditions. To permit an inexperienced person to drive for the first time in heavy traffic would not be the act of a reasonably prudent and careful person. Also, to give faulty directions or to fail to give proper directions to the driver may give rise to liability. The same is true of failure to intervene by taking the wheel when necessary, or negligent seizure of the wheel in the face of an emergency. In other words, negligence for which liability of the instructor exists lies in his failure to exercise proper care in selecting the time and place for conducting the driving lesson, also in his failure to take control of the car when he could have done so in time to avoid accident. This depends, of course, on whether the instructor exercised due care in interfering with the driver's management of the car when the danger became apparent.[11]

Before entrusting an automobile to an applicant or learner, the instructor or examiner must first determine whether the subject has any basic ability to drive a car. This will have an important bearing upon the *place* where the road work is to be done. There is a vast difference between road tests conducted (1) on a seldom used street in a sparsely settled area and (2) on a heavily traveled artery in the center of town. The semi-public driveways in a fair grounds usually offer a safe place for instruction of the wholly inexperienced, and the same is true of abandoned air strips, ball fields and other off-the-highway spots.

The license examiner usually has the matter of the applicant's ability resolved to some extent by the fact that the applicant *must* have had some preliminary instruction prior to taking his test, or he would not be ready for it. Besides, the examiner very often deals with experienced drivers. The point here is that whether the operator is accompanied by an instructor or by an examiner, either should make a preliminary inquiry to ascertain the competence of his subject before permitting him to take over operation of the car. Allowing a wholly inexperienced person to operate an automobile may, under certain circumstances, provide a basis for liability if an accident should result. This point is brought out in a New Hampshire case in which the facts, stated in the opinion, were as follows:

"The defendant had contracted for the sale of an automobile to one Peck and as a part of the transaction had agreed to teach him to drive. Peck was a man seventy-four years old who had had many years' experience in driving a Ford car 'with the old shifts,' but he had never operated a 'gear shift car' before. On the day of the accident he went to the defendant's garage in Milford to receive instructions which one Tarbell, an agent of the defendant, undertook to give. He testified that Tarbell gave him 'just theoretical instructions as to changing a gear and the brakes and the like,' after which Tarbell got into the car with him and he (Peck) started out very slowly from the garage in low gear.

"The highway in front of the garage, known as Elm Street, is a well-traveled road and a part of the state highway system. Before reaching the roadway the automobile traversed a sidewalk eight feet wide at a very slow speed. After entering the roadway, when the front end of the car was three or four feet from the center of the street, Peck and Tarbell first noticed the plaintiff's car approaching from the right and both undertook to stop the defendant's car. Tarbell pulled the emergency brake and Peck said that he 'pushed out the clutch' but 'didn't get hold of the brake.' The plaintiff's evidence tended to show that the

10.1. Blanchard v. City of Portland, 120 Me. 142, 113 A. 18 (1921). See also: 5A Am. Jur., Automobiles and Highway Traffic, sec. 135.
11. 5A Am. Jur., supra, sec. 569.

defendants car then 'leaped' or 'shot' ahead and collided with her machine inflicting the injuries complained of. From the admissions of Peck, made soon after the accident, which went before the jury without objection or limitation, it might be found that when he undertook to put his foot on the brake he depressed the accelerator and thus caused sudden movement of the defendant's car.

"The plaintiff was driving in the middle of the road at a speed of fifteen or twenty miles per hour. She saw the defendant's car moving so slowly that she thought it was going to stop for her to pass, and therefore she did not change her course or slacken her speed before she was struck . . ."

Construing these facts in terms of liability, the court said:

"It is a necessary conclusion from the testimony that the actual custody and control of the automobile was in Tarbell. Peck was known by all the parties including himself to be incompetent to manage this type of motor vehicle and it was not intrusted to him. Although Peck was at the wheel, all control of the machine except the mere mechanical manipulation of it was for the time and occasion in Tarbell. It was his duty to supervise and direct the acts of Peck and the movements of the car.

"In an ordinary case this would follow from the language of the statute which permits the operation of motor vehicles by unlicensed persons 'while being taught to operate, if riding with or accompanied by a licensed chauffeur or operator.' P.L.c.101, § 10. The purpose of this section of the Motor Vehicle Law, like that of the section which requires operators to be licensed (P.L.c.101, § 1), is the protection of the public from the acts of incompetent drivers. Johnson v. Railroad, 83 N.H. 350, 351, 143 A. 516, 61 A.L.R. 1178. Unless the instructor exercises control over the acts of the learner and the movements of the car, his presence serves no useful purpose so far as the protection of those using the highways is concerned. In the present case it appears that Peck already held an operator's license by virtue of his previous experience with Ford cars; but in view of his known inability to operate cars of other types, the responsibility of Tarbell was substantially the same as it would have been if Peck had never held a license.

"Since Tarbell, as the defendant's agent, was thus in command of the situation, any negligent failure on his part to control the movements of the car so as to avoid harm to other travelers would impose liability upon the defendant for injuries resulting therefrom. We think that there are two grounds upon which Tarbell might be found to have been negligent.

"In the first place, we agree with the argument of the plaintiff that 'the jury was warranted in finding that the cause of this collision was negligence of Tarbell in placing a known inexperienced operator at the wheel of this car in a congested part of the Town of Milford.' The evidence in regard to the traffic on Elm Street, its location in the village of Milford, the known incompetency of Peck, and the 'theoretical' character of the instruction given to him before he started the car, all tend to justify the suggested finding that Tarbell was negligent in allowing Peck to drive at the time and place of the accident.

"In the second place, it might be found that the accident was due, in part at least, to the failure of Tarbell to discover the approach of the plaintiff's car and take measures to avoid trouble before the danger of collision became imminent, and it was for the jury to say whether that failure was negligent. To be sure there was evidence that his view to the right was somewhat obstructed by cars parked along the street, but it cannot be said as a matter of law that he could or ought not to have seen the plaintiff's car in time to avoid coming in contact with it either by warning Peck of the danger or by reasonably applying the hand brake himself."

Liability was sustained in this case even though it was found that the driver "trainee" was not negligent. As to this aspect of the case the court remarked:

"The validity of the foregoing con-

clusions is not affected by the jury's finding, implicit in its verdicts, that Peck was not negligent. Although the jury must have found that it was not negligent for Peck to attempt to drive the car at the time and place of the accident, this finding does not compel a conclusion that Tarbell was free from fault in allowing him to take the wheel. Even though Peck realized his limitations as a driver, it might be found that having placed himself under Tarbell's direction for the purpose of receiving instruction, he was justified in relying upon Tarbell's judgment as to the proper time and place for him to undertake the actual operation of the car. No exoneration of Tarbell would be implied in such a finding."[12]

If he becomes involved in a collision by following the directions of his instructor, a driver trainee may be absolved from liability, provided he is so inexperienced as to have no driving judgment of his own. But the fact of giving a direction or instruction of this type may very well constitute actionable negligence on the part of the instructor. This is pointed out in a Missouri case in which the court said:

> "In this case the jury undoubtedly found that when Kathryn (driver) turned to the left, at John's (instructor) command, she was merely obeying the instructions of a licensed driver and instructor, and, if it were negligence, it was John's and not hers. A learner would be more negligent in refusing to obey the command of the qualified instructor than in obeying it."[13]

An ordinary warning of danger may suffice on the part of the instructor if he otherwise has good reason to believe the student driver is capable of operating the vehicle and making the proper maneuver. This is brought out in a 1930 Vermont case, wherein an effort was made to hold a licensed driver liable when a temporary permit holder whom he was accompanying became involved in an accident and caused injuries to another. It was argued that although the defendant license holder warned the temporary license holder, who was the actual driver, of a dangerous curve ahead, he should have taken further steps to insure making the turn in safety. The court, however, held that he had sufficiently fulfilled his duty by giving the warning, stating:

> "True, the plaintiff knew that a dangerous curve was ahead. But he had imformed the defendant of this fact and of the necessity of slowing down. The latter understood him and indicated his assent. Furthermore, he knew that the defendant had complied with a similar warning not long before, and that Mangan, another licensed driver was seated next to him. Whether the plaintiff was contributorily negligent in assuming that his warning would not go unheeded, or that Mangan would supply any further advice that might be necessary and in paying no further attention to the speed of the car was, on the evidence, a question for the jury."[14]

A duty of the instructor is to see that when a perilous situation is imminent proper steps are taken to avoid it. This frequently calls for positive action on his part. In addition to giving a warning, he may be called on to take further precautions. If he fails to react and does not take adequate measures to prevent an accident, he may be held liable. An illustration of this situation is to be found in a 1932 New Jersey case:

> "At about midday of August 31, 1926, Kohl, at the wheel, and Diebold, sitting at the right beside him, were returning from an instruction trip. Kohl had driven the car through the heart of the city's business section to a point on Atlantic Avenue opposite the Reading Railroad Station. There Kohl turned the car from the highway and endeavored to steer it through a seven-foot opening on the far side of the sidewalk. The car, instead of going

12. Greenie v. Nashua Buick Co., 85 N.H. 316, 158 A. 817 (1932). See also: Opecello v. Meads, 152 Md. 29, 135 A. 488, 50 ALR 1385 (1926).
13. Frye v. Baskin, 231 S.W.2d 63 (Mo.App.—1950).
14. Round v. Pike, 102 Vt. 324, 148 A. 283 (1930).

through the opening, ran against the wall on the abutting premises, pinning Miss LaRosa against the wall, rebounding, and hitting the plaintiff a second time. Kohl testified at the trial that in undertaking to drive in that area he had relied on Diebold's judgment, and that Diebold had permitted him to do so."

As to the responsibility of the instructor, the court said:

"If Diebold was negligent in exercising supervision over the operation and management of the automobile, and the negligence was a proximate cause of the accident, then Diebold, and, in him, the appellant (owner) were liable. These were questions of fact, and they were resolved against the appellant by the jury—properly resolved, if there was sustaining evidence. We think that there was such evidence in Diebold's failure to take over the control of the car, when, upon arrival at the obvious destination, entrance across a traveled sidewalk was to be effected, and in that, when the accident was imminent, Diebold made neither act nor gesture toward preventing the mishap.

"No horn was blown, no brake was applied, the ignition was not shut off, control of the wheel was not seized, absolutely nothing of a precautionary or preventive nature was done during the period accompanied by the turning of the car toward the sidewalk, crossing over the walk, the hitting, the rebound, and the second hitting of the plaintiff. It is asserted that the emergency brake and the gear control were not accessible to Diebold. Assuming that to be so, the service brake was apparently within his reach. To such extent as the mechanism of car control was inaccessible to Diebold, to that extent would the jury have added cause for finding that he was negligent in permitting Kohl to remain at the wheel for difficult and dangerous driving.

"The danger to the traveling public of the operation of an automobile on busy streets by a novice is commonly known. *Wilson v. Brauer*, 97 N.J. Law, 482, 117 A. 699. That danger enjoins upon one who assumes the immediate supervision of the operation of an automobile by an untaught and unlicensed driver a greater degree of care than would otherwise be the case."[15]

The high degree of care mentioned in the last sentence of the foregoing quotation emphasizes the increased responsibility of the instructor because of his superior knowledge and ability in comparison to the skill of the operator.

In effect the courts say the instructor must act as the eyes and ears of the beginning driver or trainee and alert him to dangerous situations, and otherwise do everything reasonably proper to avoid the likelihood of an accident. As the cases point out, sometimes it is not the negligence of the "tyro" driver which forms the basis for liability to third persons but rather the failure of the instructor himself to take proper measures under the particular facts and circumstances. Of course, in viewing the conduct of the instructor in an emergency we must consider whether it was appropriate on the basis of what would be reasonable and proper conduct in view of the emergency. If the steps taken are adequate when viewed in this light, then the instructor will be absolved from liability even though an accident should result.

Let us now briefly consider the chances of the instructor recovering from his pupil for injuries sustained because of the pupil's negligence. In addition to showing the negligence of the pupil, the instructor himself would have to be free from contributory negligence.[16] In a 1954 California case Mrs. Roberts, a licensed driver, was riding with Mrs. Craig, the holder of a limited instruction permit which entitled her to drive an automobile only when accompanied "by and under the supervision of a licensed driver." Upon approaching an intersection Mrs.

15. LaRosa v. Livezey, 109 N.J.L. 162, 160 A. 503 (1931).
16. 5A Am. Jur., Automobiles and Highway Traffic, secs. 68 et seq; 60 C.J.S., Motor Vehicles, sec. 444.

Craig stopped for a stop sign, following which the car began "bucking" and instead of applying her brake as directed by Mrs. Roberts (the licensed driver-instructor) she pressed the accelerator so that the car leaped forward. Mrs. Craig "froze" at the wheel and lost control. The car jumped the curb and went over an embankment, injuring Mrs. Roberts. The question in the case was whether Mrs. Roberts, knowing of the driving inexperience of the other, had assumed the risk of any injury by riding with her, also whether one who "supervises" the driving of another is thereby bound by the acts of the other. The court called attention to the fact that Mrs. Craig had completed a course in a driver's school and had taken some extra lessons to prepare herself for her driver license examination, and said:

> "It is not the law that a licensed operator riding with a person who possesses only an instruction permit, as a matter of law, assumes the risk of the driver's negligence."

The court also pointed out that no imputed negligence arises from such a relationship, either at common law or by virture of statute, and that the two do not become joint adventurers merely because of the circumstances. Emphasizing that the supervision and control granted the licensed driver *is over the person of the permittee and not over the vehicle being driven*, the court goes on to say:

> "Of course, if the licensee actively and negligently assumed to interfere with the operation of the car, or failed to object to patent mismanagement of it, or failed otherwise to use reasonable care as an instructor, regardless of whether the parties were engaged in a joint enterprise, the jury could find the licensee negligent."[17]

In other words the licensed driver is chargeable only with his own negligence under such circumstances, but is not chargeable with the negligence of the driver to which he does not contribute. This has been held to be true even under statutes providing that "any person when instructing another shall be liable with him for any breach of . . . the general highway traffic law, or of any local ordinance, rule or regulation." Such a provision of the New York Vehicle and Traffic Law[18] was held to relate only to *penal* liability of the driver and did not impose civil liability upon the instructor for negligence of the operator.[19]

In order to be chargeable with negligence it must be shown that the licensed driver had control over the actual operation of the car at the time of the accident, and the mere fact that he was a licensed driver does not of itself give him any such control.[20]

Other courts have held, in the absence of statute to the contrary, that a person riding with an unlicensed driver does not necessarily share his disabilities nor assume the risk of injury by riding with him.[21] A case of this kind arose in Massachusetts in 1938, in which a Mrs. Pitocchelli was at the wheel and a Mrs. Holland, who held a driver's license and was an experienced driver, was riding beside her, teaching her to drive. While making a left turn at an intersection Mrs. P. lost control of the car, which went off the road and turned over in a field, injuring Mrs. H. severely. At the first sign of trouble Mrs. H. had seized the emergency brake and tried to stop the car, but her efforts were frustrated by the action of Mrs. P., who pressed down on the accelerator. The trial court gave judgment for Mrs. H. and exceptions taken to the Supreme Judicial Court were overruled, affirming the judgment. The main question in the case was whether Mrs. Holland had assumed the risk of injury due to Mrs. Pitocchelli's inexperience as a driver. The court held she had not assumed such risk, saying:

> "The defendant (Mrs. P.) was a person of great experience in connec-

17. Roberts v. Craig, 124 Cal. App.2d 202, 268 P.2d 500, 43 ALR2d 1146 (1954).
18. Sec. 20(4)b, New York Vehicle and Traffic Law, (1958).
19. Sardo v. Herlihy, 143 Misc. 397, 256 N.Y.S. 690 (1932); Wolpert v. Garrett, 278 App. Div. 893, 105 N.Y.S.2d 21 (1951); Roberts v. Craig, supra n. 17.
20. VanScriver v. Abbott's Alderey Dairies, 6 N.J.Misc. 949, 143 A. 153 (1928).
21. Vidal v. Town of Errol, 86 N.H. 1, 162 A. 232 (1932).

tion with automobiles. While she was not a trained driver, she was familiar with the appearance of the mechanism of an automobile as visible to one riding on the front seat. She had ridden with her husband great distances in an automobile. As an intelligent person she could not reasonably be thought to be ignorant of the position or use of the 'gas pedal' or of the effect of stepping upon it. The two women were intimate friends and neighbors. It fairly might be inferred that Mrs. Holland knew of these characteristics of the defendant and would anticipate that her conduct in learning to drive would not imperil the one who was teaching her. The defendant owed this plaintiff the duty to use intelligently her knowledge as to the mechanism of the automobile, and to act as a reasonably prudent person might be expected to conduct herself in all the circumstances. It cannot, in our opinion, rightly be said that this plaintiff voluntarily assumed the risk of the conduct of the defendant which caused the injuries complained of. It might have been found that she did not accept as an appreciated risk the event which came to pass . . . There is nothing in the record to show that this plaintiff knew or appreciated that the defendant would press on the 'gas pedal' with such force as to overcome the effect of the continued application of the emergency brake."[22]

However, in a recent Kentucky case, assumption of risk was held to bar recovery by the instructor against the trainee. The parties were brothers, Edgar aged 64 and Allen aged 57. Edgar had not driven a car since 1916 or 1917 when he drove a Model T Ford. He had recently purchased a Chrysler automobile and brother Allen, an experienced driver, was teaching him to drive it. While out on a "road test" Edgar's foot slipped off the brake on a curve, and hit the accelerator, causing the car to spin out of control and hit a tree. Allen was seriously injured and sued brother Edgar for his damages. The Kentucky Court of Appeals, reversing a judgment in brother Allen's favor, said:

> "Our question for determination is, does one who undertakes to teach another to drive an automobile assume the risk when he gets in the car and puts his pupil under the wheel for instruction?"

After a discussion of the principles of assumed risk the court called attention to its own previous decisions denying recovery where the injured person, with knowledge of the dangerous situation in which he voluntarily places himself, takes the chances of being hurt. The court then continued:

> "Allen knew his brother Edgar was without experience in operating a modern car. Thus Allen assumed a risk when he got in the car with his brother and undertook to teach him to drive." * * *
>
> "It cannot be said this accident was caused by Edgar's negligence. It was obviously caused by his inexperience in the proper handling of the mechanical controls. An emergency was created when he pushed down on the accelerator 'too hard' and the automobile 'jumped across the road.' He then panicked and failed to use the means at his command to stop the car. This is exactly the situation a person must anticipate when he undertakes to teach another how to drive. This is the risk he assumes."[23]

It is to be noted that in some of the foregoing cases the instructor or licensed driver accompanying the other is a volunteer in performing his services and some point is made of this circumstance in connection with assumption of risk. But a driver licensing examiner does not voluntarily offer the test; the prospective licensee applies for it, and the law requires it. Consequently, the examiner cannot be held to assume risk of injury in the same sense that one voluntarily

22. Holland v. Pitocchelli, 299 Mass. 554, 13 N.E.2d 390 (1938).
23. Richards v. Richards, 324 S.W.2d 400 (Ky.—1959), characterizing the holding in Holland v. Pitocchelli, supra n. 22, as "neither realistic nor convincing."

offering his services might. So, even if the assumption of risk doctrine is held to apply, it could hardly affect the rights or liabilities of the driver license examiner. In this respect the driver license examiner is in much the same situation as the police officer who must perform his official duties under hazardous circumstances.

In connection with the right of the passenger-instructor to recover damages caused by the negligence of the operator-pupil, it will be well to mention the fact that the former is not to be regarded as a *guest* of the driver. This distinction is important in view of the familiar "guest" statutes limiting liability of the operator for injury to a guest riding with him to situations where the driver was guilty of gross negligence, wanton misconduct, intoxication and the like. One is not a guest, within the meaning of such statutes, where his presence in the car is for the benefit of the driver. In such cases he is an invitee, if he is present for the purpose of doing something for the driver other than merely being a companion.[24]

As stated in American Jurisprudence: "A licensed motor vehicle operator accompanying one driving under an instruction permit may properly be classified as a passenger rather than a guest, where the primary purpose of the trip is for business only of the permittee whom the licensee accompanied to enable the permittee to comply with statutory requirements."[25]

In such cases the driver is held liable to his passenger for simple negligence—failure to exercise ordinary care.[26] Obviously the same principles would apply to the license examiner conducting a road test, since by no logical interpretation of the word could he be regarded as a guest.

Summary

While cases bearing directly upon the rights and liabilities of driver examiners and instructors are far from plentiful, it would be well for those performing such duties to keep these points in mind:

1. The actual operation of an automobile should be entrusted only to one who has at least the basic abilities required in driving. Appropriate measures should be taken to determine this point prior to permitting the trainee or applicant to take over operation of the vehicle. Previous instruction, experience, knowledge of driving rules, and the apparent mental and physical qualities of the subject are important factors to be considered in making a preliminary estimate of his fitness to be placed in charge of the car's potentially dangerous machinery. The examiner should give certain skill tests immediately to discover how well the applicant can control the car before proceeding with the road work, especially before moving into heavy traffic. If during the road test the trainee or applicant demonstrates lack of basic driving competence or shows a tendency toward recklessness, the road test should be terminated at once.
2. Careful consideration should be given to the place where the vehicle is to be driven during the test or instruction. This may depend to some extent upon the skill and ability of the beginner as well as his driving judgment, as ascertained by his actions or by the preliminary investigation. It makes good sense to give initial driver instruction in areas where the likelihood of accident is remote. Where off-the-highway facilities exist these should be used, especially in the case of inexperienced drivers. The perils of instruction in heavy traffic need not be described: they are apparent.
3. Potentially hazardous situations should be avoided, and that is the

24. 5A Am. Jur., Automobiles and Highway Traffic, sec. 498, nn. 11.1 and 11.2, also sec. 514, n. 17; Taylor v. Goldstein, 329 Mass. 161, 107 N.E.2d 14 (1952); Van Auker v. Steckley's Hybrid Seed Corn Co., 143 Neb. 24, 8 N.W.2d 451 (1943).
25. 5A Am. Jur., supra, sec. 522, n. 5, citing Roberts v. Craig, supra n. 17.
26. Semons v. Towne, 285 Mass. 96, 188 N.E. 605 (1934). See note: 10 ALR2d 1361.

purpose of having the instructor present in the car. Alerting the driver to situations of potential danger is a part of his duty and his failure to exercise proper supervision in this respect will amount to negligent omission on his part.

4. When a situation of emergency develops, the instructor or examiner should do whatever is reasonably possible to avert an accident, or at least to minimize its consequence if it cannot be avoided entirely. He should be ready to seize the wheel, sound the horn, apply the brake or take whatever other measures are available at the moment, if they become necessary. In most modern cars it is no longer possible for a passenger to seize the emergency brake, but the foot brake is still reasonably accessible in emergency. Of course, where dual controls are placed in an automobile, the party accompanying the driver may use them to stop the car and should do so where the need arises.
5. Since the main purpose of having an instructor present in the vehicle during road work is to provide available advice and counsel to the learner, the instructor must be careful to give the right kind of help when it is needed. The driver is more or less dependent upon him and if he gives wrong, illegal or "trick" directions, or fails to give correct guidance, he may be the one responsible.
6. The instructor or examiner should remember that his is not merely a passive role. He has a positive duty to exercise reasonable care, under the circumstances of one in his position, to prevent injury to the driver, himself and other motorists and pedestrians. ★

ACCIDENT ANALYSIS *(Continued from page 14)*

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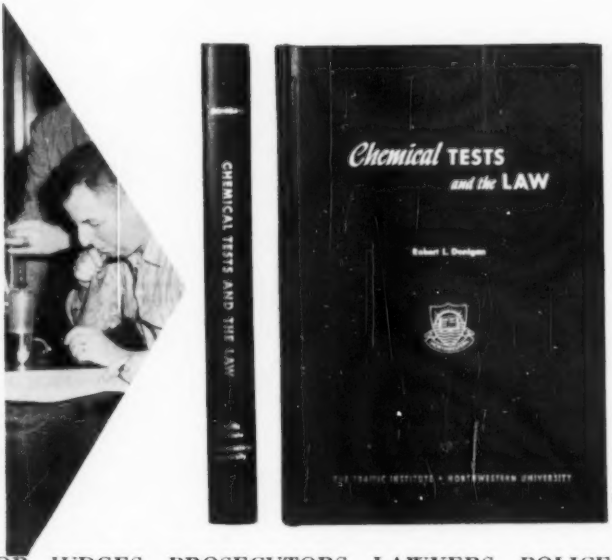

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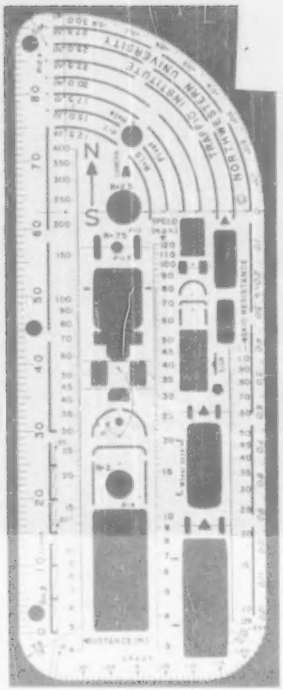

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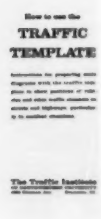
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